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ABSTRACT

This collection of 9 papers from the International Reading Association's Reading Research 2001 Conference (RR2001) addresses comprehensive reading instruction across the grade levels. The introduction, "How Will We Develop the Concept of Comprehensive Reading Instruction Across Grade Levels?," notes that five quandaries arose in the discussion of comprehensive reading instruction: comprehensiveness; development; motivation; differences; and time. The papers in the book are: (1) "Early Reading Development in a Young Bilingual" (Eurydice Bouchereau Bauer); (2) "Enhancing Emergent Literacy with Spanish-Speaking Preschoolers in the Inner City: Overcoming the Odds" (David B. Yaden, Jr. and Danny Brassell); (3) "Incorporating Informational Text in the Primary Grades" (Nell K. Duke, V. Susan Bennett-Armistead, and Ebony M. Roberts); (4) "Linking Reading Assessment and Instruction in Elementary Grades" (Scott G. Paris); (5) "Balanced Literary Instruction: Addressing Issues of Equity" (Kathryn H. Au); (6) "Formulating a Research Agenda about 'Reading for Understanding'" (RAND Reading Study Group: Catherine Snow, Chair; Anne P. Sweet, Donna E. Alvermann, Michael L. Kamil, and Dorothy S. Strickland); (7) "Toward an Understanding of the Development of Reading Comprehension Instruction Across Grade Levels" (Patricia L. Anders); (8) "Text Comprehension: The Role of Activity Theory in Navigating Students' Prior Knowledge in Content Teaching" (Thomas W. Bean); and (9) "Adolescent Literacy for All Means Forming Literate Identities" (David W. Moore). An afterword by Cathy M. Roller concludes the book. An author index and subject index are also included. (PM)

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Comprehensive Reading Instruction Across the Grade Levels

A COLLECTION OF PAPERS
FROM THE READING RESEARCH
2001 CONFERENCE

Cathy M. Roller
Editor

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INTRODUCTION

How Will We Develop the Concept of Comprehensive Reading Instruction Across the Grade Levels?

Cathy M. Roller
International Reading Association

The collection of papers in this volume is based on presentations delivered at the International Reading Association's Reading Research 2001 Conference (RR2001), titled Comprehensive Reading Instruction Across the Grade Levels. The acrimony of the debates regarding beginning reading instruction in the media, the policy world, and indeed among educators themselves suggested that some attention to *comprehensive* reading instruction *across the grade levels* was warranted. In the months leading up to the conference, there was a tremendous policy focus on beginning reading and literally no federal policy focus on the years beyond third grade. The either/or, phonics/whole language controversy labeled the "Reading Wars" by the media continued to resurface despite many efforts to declare a truce—hence the focus of both the conference and this volume.

RR2001 was one in a series of such research conferences. Each year, the Association's Reading Research Conference draws an audience of about 400 reading educators—district-level reading coordinators, university teacher educators, reading specialists, administrators, Title I teachers, classroom teachers, education association staff, and media. They come to learn about cutting-edge research that can inform their work. By publishing this volume, we hope to extend the reach of the conference to similar reading educators who may not have had the opportunity to attend. The chapters in this volume explore the landscape of comprehensive reading instruction and provide insights and suggestions for moving beyond polarities.

In the course of the conference and in the preparation of this volume, the complexity of the phrase "comprehensive reading instruction across the grade levels" became obvious. Many in and outside the field are tired of the bitter debate and would like to agree to a description of comprehensive reading instruction and get on with the work. However, this volume does not provide a definitive research-based description of comprehensive reading instruction across the grades. The major value of this volume is to provide some snapshots of comprehensive reading, to highlight gaps in the knowledge base, and to serve as an impetus to further investigation,

which is persistently focused on delivering comprehensive reading across the grade levels.

The lack of a definitive research-based description of comprehensive reading instruction across the grade levels was presaged in the organization of the conference program. Ordinarily, the conference opens with a plenary address that sets the tone of the conference. However, no single individual is strongly associated with the entire range of reading instruction. Therefore, the conference began with a plenary panel of researchers noted for a significant focus on one of the following areas: (1) Dorothy S. Strickland (Rutgers University), emergent and early literacy; (2) Nell K. Duke (Michigan State University), primary grade (K–3) reading; (3) John T. Guthrie (University of Maryland), intermediate and middle grade reading; and (4) Donna E. Alvermann (University of Georgia), adolescent literacy. The conference breakout sessions also were organized in developmental-level strands—again the speakers were easily associated with particular levels—and the chapters in this volume are organized according to the same development levels. By looking across the levels, we can discover dimensions of comprehensive literacy *across* the grade levels. This volume provides an initial look—a definitive description lies beyond the scope of the conference and this volume.

The RR2001 panelists raised five quandaries related to comprehensive reading instruction across the grade levels: (1) comprehensiveness, (2) development, (3) motivation, (4) differences, and (5) time. The remaining sections of this introduction will draw heavily on the comments they offered. Throughout this volume, an introductory paragraph to each chapter will locate and highlight the authors' contributions to a description of comprehensive reading instruction across the grade levels, and the afterword to this book will suggest a path that might lead us beyond the quandaries.

Quandary 1: Comprehensiveness

What is comprehensive reading instruction? How should we define it? There are, in fact, many existing definitions. For example, there are published reading series based on scope and sequence charts, and there are state and local reading curricula and state standards that describe comprehensive reading instruction. Although there is considerable overlap among the scope and sequence charts, the local reading curricula, and the standards, no two are identical, and there is no single sequence or description validated by research.

Several panel members offered some general principles or categories for comprehensive reading instruction at particular levels. Dorothy Strickland used her experience of excellent emergent reading instruction to identify four important characteristics of early literacy instruction that have emerged in the last 25 years:

- More attention to writing
- Use of trade books
- Integration of language and literacy and content
- Differences (ability, experiences, prior experiences with literacy, linguistic and cultural differences)

Nell Duke suggested a list (not necessarily comprehensive) of topics teachers are currently expected to teach in the primary grade reading instruction:

- Comprehension instruction
- Decoding instruction

- Word recognition
- Concepts about print
- Motivation

John Guthrie suggested that we describe the comprehensive reading performance of good readers and then organize instruction to foster performance consistent with that description. Based on this strategy, he nominated six principles of comprehensive reading instruction for third- through eighth-grade readers:

- Establish reading fluency
- Teach cognitive strategies such as questioning, summarizing, and using concept maps
- Support knowledge development
- Teach a diversity of texts
- Provide motivational support for reading
- Align assessment with instruction

Donna Alvermann suggested three expectations of comprehensive reading instruction at the middle and high school levels:

- Attend to reading demands of various domains of knowledge (sciences, social studies, math, and literature).
- Provide developmentally appropriate reading instruction for struggling readers.
- Attend to adolescents' out-of-school interests (computers, the media, and interactive communication technologies).

Practically, there are many definitions of comprehensive reading instruction across the grade levels. It is probable that there are many ways to segment the domain of comprehensive reading instruction, and any number of different segmentations and categorizations done at various levels of abstraction will suffice to plan effective reading instruction. The danger in this practicality is, of course, that while there may be many ways to segment it at various levels of abstraction, there also may be many segmentations and abstraction levels that exclude important parts of the domain or focus on unnecessary aspects of reading, and thus result in less than optimal instruction. Another possibility is the various segmentations, while possible, may not in fact be optimal. And that is what the so-called Reading Wars are all about. Particularly, the failure of many urban and rural schools to teach many poor and minority students to read well suggests that the instruction offered may not be optimal.

Quandary 2: Development

The quandary of comprehensiveness is compounded by the quandary of development. Not only is there a lack of knowledge about *what* is included in comprehensive reading instruction, there is also a lack of knowledge about the way comprehensive reading instruction changes over time. The curricula presume developmental sequences, yet again there is a lack of empirically grounded descriptions of those developmental sequences. In their remarks, both Guthrie and Duke reported specific examples. Guthrie noted that he and Ana Taboada, a doctoral student at the University of Maryland, had reviewed the research literature related to six reading strategies for comprehension, such as questioning:

> We asked, "How does questioning change over the elementary grades? If we want to adapt our teaching to children's development, how should we adapt it? How should we be teaching questioning differently in grade 5 than we do in grade 3?" We examined 30 or 40 studies of children's questioning asking, "What is questioning

> as a dependent variable? What is questioning like as a quality of the learner—not with respect to teaching it now—but what is questioning like for kids? Are good-questioning third graders like or different than poor-questioning third graders, or fifth graders?" In fact, we found very little systematic information. There were no literature reviews about the development of questioning strategies.

He posed development as a critical frontier for reading research.

Nell Duke shared a similar experience:

> David Pearson and I...wrote a book chapter recently in which we reviewed research literature on comprehension in elementary grades. What do we have as research-proven strategies for teaching comprehension in elementary school? We followed that chapter by writing another chapter restricted to grades K, 1, and 2. What had been an amazingly rich body of research on grades 3, 4, and 5 fell out to a handful of studies at K, 1, and 2. In addition, the kinds of questions that were being asked and strategies that were being tested in K, 1, and 2 looked rather different. As a field, we need to work much, much harder to get ideas about developmental trajectories over time.

The gaps in research-based knowledge about development are reflected in the daily lives of practitioners, as well. Strickland commented that many early childhood teachers do not have a good understanding of what comes after preschool. The other panelists agreed that often practitioners are isolated by level, have little contact with one another, and do not know what children in previous classrooms, or in classrooms later on, do in relation to reading instruction. Only the students experience the entire continuum of reading instruction.

Quandary 3: Motivation

Motivation was not a prominent part of the panel discussions or the chapters related to either emergent or beginning reading. It was, however, prominent in the discussion of both intermediate and adolescent reading instruction. In that sense it may be a subcategory of developmental issues. However, motivation was such a prominent focus of both the panel discussion and the final chapters of this volume (see chapters 7, 8, and 9) that I elected to treat it as a separate quandary. Recall that motivational support was one of the six principles that Guthrie proposed as essential to comprehensive reading instruction in grades 3 through 8. He talked about the importance of choice to developing intrinsic motivation for reading. He said that teachers who are providing comprehensive instruction are systematically helping students connect reading to their personal lives and personal experiences. They enable students to become choosers, to become decision makers about their own reading and writing.

Alvermann emphasized the importance of these connections in her opening remarks. She noted that as difficult as it is to develop empirical descriptions of comprehensive reading instruction, to describe developmental changes in that instruction, and to accommodate the full range of differences in today's classrooms, these alone will not suffice. She argued that we need to look beyond the classroom as well:

> Not to ignore the classroom, obviously, but to see what students are doing with multiple literacies outside of the classroom, so that behavior outside the classroom can inform what we do inside.... It means becoming aware that the students are very literate in ways that we sometimes don't take into account or accept as being literate in our school-based literacy perspective.

Alvermann agreed with Guthrie's focus on making connections between students' lives and the texts they read in school. She noted that today's students, using Internet technologies, are very good at making connections. And she underscored Guthrie's comments about the social nature of good reading instruction. Taking all those things into account, she argued that we must examine some of the adolescent literacy expertise outside of classrooms. She talked about some adolescent readers with whom she has been working—students in the 25th percentile or below in reading achievement scores:

> They tell me they're not reading...that what they are doing doesn't count as reading. In other words, they wouldn't get credit in school for doing the kind of reading they are doing. And yet they're making predictions about the next episodes, about Dragon Ball Z, which is a very complex Japanese animé. For those teachers who wonder whether [students] ever learn anything about character development, they are.... These 25th-percentile students are able to show and understand how one character can be good at one time when interacting with certain other characters, and then evil when interacting with other characters.
>
> If the middle school and high school teachers...could come down to the library and observe for a few moments, they would be amazed at what these students who are supposedly alliterate or illiterate are able to do. The teachers would be proud because the students are using the skills the teachers are teaching in school. But they're applying them in some material that they are interested in.

Alvermann concluded her opening remarks by asking the panel and the audience to consider seriously what counts as reading in our classrooms.

The discrepancy between in- and out-of-school behavior has been documented in many studies beginning with Labov's (1972) study of African American youths' use of language. Because we know that the general motivation to read declines as children move through school, it is critically important to attend to issues of motivation when we discuss comprehensive reading instruction across the grade levels. In his chapter in this volume, David W. Moore writes of the metaphysical distress of adolescents who typically struggle as readers in school (see chapter 9). He quotes Meek (1983) who wrote, "the real condition of these pupils was not lack of desire to learn, or basic skills, but absolute conviction that they could not be successful no matter what they did" (p. 214). The issue of interest and motivation becomes more and more critical as children move through school.

Quandary 4: Differences

Children's individual differences become an added tension for teachers' daily decision making. Not only must teachers provide comprehensive instruction across the grade levels, they must also meet the needs of an increasingly diverse student population. Dorothy Strickland introduced this topic in her opening remarks. She spoke of a variety of differences—ability, personal experiences, prior experiences with literacy, linguistic and cultural differences—and she asked, "How do we help teachers to deal with all the variability in their classrooms?" She argued that answering this question should be the heart of the research efforts.

Adding individual and group differences to the mix of tensions that teachers negotiate on a daily basis increases the workload and makes more demands on instructional time. At one point in the panel discussion, I asked the panelists, "How do we, as we're delivering comprehensive reading instruction, deal with individual

differences in a standards-based environment?" Strickland proposed the following:

> One of the things that many of us have been writing about, and talking about, is the notion of intervention in the classroom. Certainly we've got lots of initiatives—Title I and so on—that are outside the classroom. But we need to do more within classrooms to help teachers with flexible grouping, with working with individuals, with ongoing informal assessments, and with making decisions about instruction based on those assessments.
>
> I have seen excellent examples of that in my own state [New Jersey, USA].... A lot of variability in the instructional offerings requires a masterful job of organization. The infrastructure in the classroom has to accommodate it. It's not just knowing strategies, and knowing about comprehension, or knowing about decoding. It's how you deliver instruction and deliver it differentially.

Strickland suggested that good curriculum coordinators working at the district level have a sense of what children should know and be able to do, and they also know how to organize classrooms so that children at different developmental points can learn whatever it is they need to learn next. It is also crucial that teachers know student backgrounds well enough to help students make the important connections between their lives and the texts they encounter in school. These connections are central to developing and sustaining the long-term motivation for achieving literacy. This is increasingly a challenge as classrooms grow more diverse.

Quandary 5: Time

Terms like *balance* and *comprehensive* may be adding to the confusion surrounding reading instruction and creating a situation that disregards the practicalities and time constraints that teachers face daily. In his chapter in this volume, Paris writes:

> The term *balance* has become a popular slogan for including both decoding and comprehension features in instruction, yet it has been extended to include a call for balancing a huge number of factors.... The result has been a hodge-podge of instruction that is so inclusive that teachers are being asked to do more things than they can accommodate.

The term *comprehensive* was selected for RR2001 and this volume because it does not signal polar dichotomies. However, as Paris points out, it too is fraught with difficulties (see chapter 6 in this volume) because "teachers again are being asked to do everything for all children."

By moving the conversation beyond polarities, we risked placing teachers in the impossible position of teaching everything to all children, which is difficult because of limited amounts of time in the classroom. The tension between comprehensiveness and time surfaced in the panel discussion as well. Guthrie commented on the increasing expectations for teachers to teach all things to all children. He noted that curriculum is being mandated and that it is increasingly detailed. He also noted that required assessments are increasing. Duke commented on the pressure this places on teachers:

> As a research field, we need to be thinking much more seriously about helping teachers distribute their time across the different types of needs that children have, about making the most use of our time in the grade levels, and to really take seriously the practical challenges that arise when we keep saying to teachers, "but you have to have some of this, and you must have some of this, and you must have some of this."

The tension between comprehensive instruction and limited instructional time perme-

ates the lives of teachers and children. There is never enough time to provide all the potentially valuable instruction. John Guthrie used the analogy of a recipe to frame the dilemma:

> We...have serious needs in our continuing understanding of what the comprehensive reading instruction really means. I gave six principles as ingredients. However, we don't know the best mix of those ingredients. We don't know the best mix for different ethnic and language groups. We don't know quite how the mix changes over time.

Such lists of ingredients abound. For example, the National Reading Panel identified effective instructional practices in phonemic awareness, phonics, fluency, vocabulary, and comprehension. In some cases we also know something about the quantity and timing of these ingredients. For example, the National Reading Panel report suggests that phonics instruction is most effective when it is offered in grades K–2. It also recommends that between 5 and 18 hours of phonemic awareness instruction in pre-K–K may be optimal. However, for many ingredients, there is no clarity or certainty on optimal amounts or optimal timing of instruction. To carry the recipe analogy further, we have no directions for mixing and no cooking instructions.

This is the daily quandary teachers face. How do they make crucial instructional decisions? How do they allot instructional time? While it is important for children to receive comprehensive reading instruction, teachers must be, as Paris indicates, "selective and practical."

The chapters of this volume offer some guidance for addressing the constraints of time in the classroom. Perhaps the most important principle is that instructional activities must accomplish more than one goal. Paris points out that informal assessment and instruction can be so closely intertwined that it is difficult to determine whether assessment or instruction is the major focus of particular activities.

The other call was for the integration of content and reading instruction. Dorothy Strickland introduced this topic in her opening remarks as she described some of the features of good emergent literacy instruction.

> Learning about literacy isn't done in a vacuum. Children must have things to talk about if they are to develop their language and literacy skills. You might ask, "Why aren't there things to talk about?"... [In many situations] people aren't using activities about content, and you need these activities for language to occur and for extending the experiences of kids.

Guthrie concurred and indicated that though combining content and reading instruction is necessary, it is not necessarily easy. He asked,

> How much time do you give to historical understanding in fourth grade that is somewhat apart from actual text reading about that historical topic in fourth grade, if you are trying to integrate reading and history? What is the balance of time—10% reading and 90% history? 50/50? These and many other questions haven't been examined. So the notion of balance hasn't been explicated at the level necessary for a fourth-grade teacher to say, "Fine, now I understand how I'm going to spend three months with my students."
>
> I believe, then, there's a crucially important research agenda having to do with...connecting content goals and reading goals...the challenge of linking those deeply, is there. It will reward research efforts.

The Chapters in This Volume

Many of the chapters in this volume address the quandaries outlined by the panel discussants; some address new issues of concern, some offer

solutions, and some recommend areas where further research is needed. Topics vary in scope and perspective, but, as mentioned previously, in keeping with the theme of the conference of comprehensive reading instruction *across the grade levels*, the chapters address issues at each school-age developmental level: emergent and early literacy, primary grade reading, intermediate and middle grade reading, and adolescent literacy.

In chapter 1, Eurydice Bouchereau Bauer describes the literacy development of a very young bilingual child, documenting the lack of research on the reading development of young bilinguals and the tendency of research in early literacy development to focus on reading in the official language. David B. Yaden, Jr., and Danny Brassell in chapter 2 also focuses on children growing up bilingually. The authors give data from a multifaceted intervention that involves physically altering the preschool by providing play areas with materials that encourage "literacy" play, by increasing the amount of both Spanish and English print available to the children, by working alongside teachers to introduce teaching practices such as shared book reading, and by involving parents through the use of a free lending library.

The importance of text format or genre, particularly informational text, is the centerpiece of chapter 3. Authors Nell K. Duke, V. Susan Bennett-Armistead, and Ebony M. Roberts document the scarceness of informational text in primary grade classrooms, argue that the research does not justify the scarcity of informational text in these classrooms, and offer a number of research-supported arguments for greater attention to informational text in the primary grades.

In chapter 4, Scott G. Paris argues that the most important action teachers can take is to blend their diagnostic assessment of children's skills with appropriate instruction. The chapter suggests a conception of reading development and instruction that focuses on children in their classroom environments rather that on external lists, sequences, and definitions of comprehensive reading instruction.

Chapter 5 by Kathryn H. Au addresses the political issues surrounding balanced or comprehensive reading instruction. The author tackles specific aspects of balance that impact equity, and focuses particularly on what balance means for Title I schools.

Chapter 6 is a report from the RAND Reading Study Group (RRSG), presented by Catherine Snow, Anne P. Sweet, Donna E. Alvermann, Michael L. Kamil, and Dorothy S. Strickland. The chapter is a product of the initial deliberations of RRSG and commentary on that report based on feedback from the field. The authors organized their draft around a set of components that met a set of criteria including the following: (a) There is good evidence that they are essential for reading comprehension, (b) they are distinguishable from one another, (c) they are relevant to many different reading tasks, and (d) they function both individually and in various combinations for successful reading comprehension.

Patricia L. Anders in chapter 7 discusses the disagreements in the field regarding the definitions of the terms *reading comprehension*, *development*, and *instruction*. This chapter directly addresses the conflicts surrounding balance and comprehensiveness. Anders argues strongly for a less linear and more contextualized understanding of reading and reading instruction. Chapter 8 by Thomas W. Bean complements Anders's chapter in its more contextualized look at reading instruction, and it presents a framework for thinking about inquiry-based lessons—Activity, Response, Context, and

Concepts (ARCC), which is based on activity theory and assists teachers in reflective examination of lessons.

In chapter 9, David W. Moore describes adolescent literacy instruction informed by the research and professional literature that centers on literate identity. Moore states that literate identity should be a prime consideration when designing adolescent literacy programs, and he argues that interventions aimed at helping these students must focus on building students' literate identities through practices that address community and agency.

Invitation

I invite the reader to read each of the chapters that follow with an eye to the quandaries of providing comprehensive reading instruction across the grade levels. Each of the authors captures important aspects of the developmental trajectory of reading instruction, and each includes aspects particular to the specific topic of their chapters. While reading across the chapters, ask yourself the following questions:

- What are the components of comprehensive reading instruction at this level?
- How do the components change at particular points in the developmental trajectory?
- What instructional practices can foster the necessary motivation to undergird comprehensive reading instruction across the grade levels?
- How can reading instruction be both comprehensive and adapted to the wide range of differences present in today's classrooms?
- How can teachers address time constraints by being selective and practical while still providing reading instruction that is comprehensive?

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CHAPTER 1

Early Reading Development in a Young Bilingual

Eurydice Bouchereau Bauer
University of Illinois

THIS CHAPTER describes literacy development for a very young bilingual child. The account of story-reading events with parents and caregivers suggests the complexities of early reading development for a child who is being brought up bilingual. By focusing on code switching (moving between two languages), Bauer develops hypotheses about the impact of text formats, text content, and the language characteristically spoken by the respective caregivers (i.e., mother, father, au pair). Both text content and its relationship to the young reader and text format are issues that surface again later. Connections readers make between texts and their lives were major topics addressed by the Reading Research 2001 panel members. It is clear in this chapter that these issues surface very early in emergent reading development.

This chapter and the following are the only ones in this volume that directly address the issues of multiple languages and their effects on reading development. This early look suggests that the study of emergent biliteracy in a multiple language context may offer a very positive and productive perspective for the development of biliteracy for students who acquire their second languages later in the developmental trajectory. One of the most important aspects of this chapter is the documentation of the lack of research investigating reading development of young bilinguals and the tendency of research in this area to focus on reading in only one language, the official language of the geographical area in which the young bilingual lives.

In the field of education, much of our effort in understanding bilingual students has focused on oral language development (Carrell, 1989). The emphasis on oral language development can be explained by examining the political climate for funding and theoretical grounding for research with bilinguals. The political push behind what we do with bilinguals can be seen by closer examination of the phrasing and rephrasing of the Bilingual Educational Act. Early bilingual education programs in the United States (in the 1970s) emphasized the use of students' native language and culture as part of instruction. However, between the late 1970s and mid-1980s there was a clear shift in the language of the Bilingual Education Act. Students' native language had become simply a tool for learning English. By 1988, programs across the country that emphasized English-only instruction were provided along with bilingual education programs (for more discussion of these trends, see Garcia, 2000). This type of political decision making has created an environment that focuses on getting students to a certain level of English proficiency in order to accomplish their academic tasks in that language.

Another reason for the focus on oral language proficiency is the theoretical assumption that oral language development must precede literacy development. The prevailing view for this position comes from the work of Cummins (1981, 1989), who purported that students transfer their knowledge across the two languages because of their cognitive ability in one language, most often the dominant language. Although there are differing views on the amount of second-language oral proficiency that must exist (e.g., August & Hakuta, 1997; Snow, Burns, & Griffin, 1998), the assumption is that literacy skills in the second language rests on students' oral language skills. What is not explored in the literature is how a literacy-rich environment in both languages may impact oral language and literacy development in both of those languages.

Although it is important to understand the language development of these children, greater efforts should be directed toward understanding their early literacy development. The current research on literacy development of bilinguals is primarily focused on the instruction given to school-aged students that are in fourth grade to middle school (Garcia, 2000). There is a great need for research that focuses on the early literacy development of bilinguals.

The current literature on the early literacy development of monolingual students suggests that literacy experiences during the preschool years provide a sound foundation for more sophisticated literacy skills (e.g., Snow et al., 1998). The current assumption is that bilinguals and monolinguals would exhibit the same sort of skills. Yet metalinguistic research with young bilinguals purports that these children have enhanced metalinguistic awareness. Collectively, these studies have revealed that bilingual children have a keener awareness of language itself and this is tied to their awareness of grammatical properties such as knowing the number of words in a sentence (Galambos & Gouldin-Meadow, 1990), and the ability to separate meaning from form (Bialystok, 1997). Some research studies have established a link between language skills and literacy development (e.g., Tabors & Snow, in press). Specifically, students must move from general knowledge that is used for supporting spoken language that is primarily tacit to conscious knowledge that is metalinguistic awareness (Bryant, MacLean, Bradley, & Crossland, 1990). However, the impact of young bilinguals' metalinguistic awareness on early literacy development has not been fully investigated. The need for us to address the early literacy development of young bilinguals now and not later is reflected in the recent census data (U.S. Census Bureau, 1990, 2000), which shows a marked increase in the number of bilingual households in the United States.

Much of our understanding of biliteracy development rests on limited studies that have examined the issue with young children. Studies such as the one conducted by Bruck and Genesee (1995) found that French-English bilingual children in Canada who were attending a French immersion program outperformed other English-speaking students on tests of onset and rimes. Support for early literacy skills of young bilinguals were also supported by Bialystok (1997), whose study examined 4- and 5-year-old bilingual (French-English and Mandarin-English) and English monolingual preschoolers' metalinguisitic awareness as related to beginning reading. She assessed how bilinguals and English monolinguals responded to a moving word task. Bialystok found that the bilingual children outperformed their English-speaking counterparts in the moving word task and performed equally well in both languages.

Geva, Wade-Wooley, and Shaney (1993) extended the discussion on early biliteracy development through their investigation of English-speaking first graders who were learning Hebrew as a second language. Their findings suggest that certain literacy skills may be more pronounced in one language than in another. For example, students in the study were able to decode better in Hebrew than in English. Geva and her colleagues speculated that this may be because Hebrew is more phonetic. This study also suggests that young children who have opportunities to interact with print in both languages at a very young age may gain different insights on text and language as a result of their interactions.

The importance of insights gained as a result of being bilingual was directly addressed in the work of Yelland, Pollard, and Mercuri (1993). Their study examined the performance of kindergartners and first graders (marginal bilinguals and monolinguals) in word awareness and written-word recognition tasks. Their findings suggest that even in the early stages of becoming bilingual, these students outperformed the monolinguals on word awareness tasks. They found gains of six months for students who received one hour of Italian instruction per week during language arts. Assessment of the same groups of children at the end of first grade revealed that scores favoring the marginal bilinguals were still significant.

Across the metalinguistic studies, it appears that being bilingual has certain advantages. A rationale offered by Bruck and Genesee (1995) for these early skills is that young bilinguals' ability to speak two languages offers them a sort of "contrastive linguistics instruction which leads bilingual children to compare and analyze the structural aspects of language in more advanced ways than monolinguals" (p. 308). Although Bruck and Genesee provide a provocative explanation for some of the findings with young bilinguals, it remains unclear how these skills develop.

Even when one broadens the definition of early reading development for young bilinguals to include storybook reading, the research literature is scant. The few research studies on storybook reading with young bilinguals have focused primarily on parent/caregiver and child interaction rather than teachers reading to groups of children (for a more detailed discussion see Barrera & Bauer, in press). The participants in many of these studies tended to be immigrant adults and their children who are in the process of becoming bilinguals (e.g., Eldridge-Hunter, 1992; Krol-Sinclair, 1996; Rodriguez-Brown & Mulhern, 1993; Thornburg, 1993). For many of these families, storybook reading was not a naturally occurring activity in their homes. However, these studies revealed that as a result of instruction, these parents were quite capable of learning new read-aloud strategies and refining previously acquired ones. What was often prevalent in these studies was the limited attention given to the books used for these interactions and the impact of these events on students. Delgado-Gaitan's (1996) two-year family literacy project poignantly illustrates that although immigrant parents can be taught to demonstrate specific school-like behaviors, much may be lost in terms of learning about the role of culture in the storybook-reading process. In essence, researchers often remove or under-explore cultural and linguistic factors that may impact storybook interactions. By doing so, we invariably limit what it is we can learn about the way bilinguals engage with text.

One empirical study (Sulzby & Teale, 1987) examined the interactions during storybook reading as it naturally occurred in homes of

bilingual families. The study investigated bilingual parents' language preference during storybook reading with their children. Teale found that most of the families showed a preference for selecting texts in English and reading them in English. He also found that one family showed a clear preference for establishing storybook reading as a Spanish event. That is, the family chose to read English-and-Spanish books in Spanish.

Overall, these studies tend to investigate storybook reading with children who are in the process of becoming bilinguals rather than those being raised to be bilinguals from a very young age. That is, these children spoke a home language and were learning English as a second language. In most of the research conducted in the United States, the first language of the participants has been Spanish. In many of the cases, storybook reading and the interactions during such an activity were treated as an intervention for both parents and children. A problem with this perspective is that in the end, very little is learned about the role of literacy in the lives of these children at home. As shown in Teale's research study (1986), bilinguals may have access to literacy interactions that are not necessarily presented through storybook reading.

What is clear across many of the studies conducted with young bilinguals and their family members is that a monolingual lens is often used to understand these individuals. More often than not, linguistic and cultural factors are underexplored, thereby limiting what it is we understand about bilingualism and early literacy development.

Context for Ongoing Study

In an effort to strengthen the literature on biliteracy development of very young children, Bauer (2000) has investigated the early literacy development of her daughter, Elena, from birth. Elena is being raised to speak two languages, English and German. Over the course of this three-year study, Bauer collected and subsequently analyzed videotaped and audiotaped storybook interactions.

Since the age of 6 months, Elena was read to daily in both languages. Most of these readings occurred before naptime or bedtime, and in most cases Elena selected the books that were read to her. There were other times when she was read to, but these readings were not tied to set routines. The videotaped and audiotaped interactions represented interactions with German speakers, her father and au pair, and the primary English speaker, her mother.

The texts used in this study represented a variety of genres: predictable texts (*Brown Bear, Brown Bear, What Do You See?* [Martin, 1983] and *The Wheels on the Bus* [Zelinsky, 1990]), modern fantasy picture storybook (*Where the Wild Things Are* [Sendak, 1988]), and realistic fiction (*Black, White, Just Right* [Davol, 1993] and *Kleine grosse Schwester [Little Big Sister]* [Forslind, 1997]). Shared readings of these texts were often followed by independent reading of the same texts. The only book of the five that Elena owned in both English and German was *Brown Bear, Brown Bear, What Do You See?* Although originally written in English, the German version is not a direct translation. When the German speakers read the three English books, they translated the stories each time as they read them. The German text, *Kleine grosse Schwester*, was only read in German to Elena.

Both parents follow the one-speaker, one-language rule (Ronjat, 1913); Elena's father speaks to her in German and her mother, the researcher, in English. Elena was also cared for by German au pairs who spoke to her only in

German. All of the adults speak to one another in English. In order to support Elena's German skills, she visits Germany yearly. Elena's literacy interaction was documented from the age of 2 to 5 (for a detailed discussion of the design of the study, see Bauer, 2000).

Although the adults in the home interacted with Elena in a given language, she was aware of the fact that her family members were multilingual speakers. For example, she had numerous opportunities to see her father speaking English and French to her maternal grandparents. She also observed her mother speaking German to her paternal grandparents and French or French Creole to her maternal grandparents. Elena's experiences support the position that her world is linguistically diverse.

In this chapter, Bauer will draw from the first year of data to shape a discussion on the role of bilingualism on the early literacy development of young children. Central to that discussion is the question of concurrent development of literacy skills in both languages. Findings from this study showed that Elena viewed shared and independent reading events differently than she viewed play events and that her different perspectives resulted in different code-switching, a common practice among bilinguals, defined as the ability to select and combine two different languages within sentences or between sentences to reflect "linguistic factors such as setting, tone and purpose of communication or ethnolinguistic identity of the [speaker]" (Genesee, 1989, p. 164). Bauer offered several explanations for the different code-switching patterns across the reading events, such as demand of the text, encoding of the text, influence of the reader's style, and the child's goal. Collectively, these findings suggest that Elena's book interactions in both languages did not appear to confuse her and that her code-switching was systematic. The next section presents a discussion of three aspects from the study that are relevant to understanding early literacy development of young bilinguals.

Rhythmic Component of Text

One of the key issues that often is not addressed with young bilinguals is text format. Often when text is discussed, it involves whether or not children should be exposed to decodable text or texts that do not have a controlled vocabulary. Bauer's (2000, 2001) findings suggest that bilinguals do not have to start with such books if the context for literacy provides a variety of means for interacting with print. In addition, these findings suggest that other aspects of text can exert some influence on language production.

One aspect of the analysis from Bauer's (2000) study is the role of book format on the level of participation by her daughter during storybook interactions. Specifically, she examined the role of predictable and highly patterned texts on shared reading storybooks. Research studies on emergent literacy revealed that these texts support young children's early literacy development (Strickland & Morrow, 1989). Bauer found that these authentic texts served a very important role in her daughter's literacy and language development. Texts such as *Brown Bear, Brown Bear, What Do You See?* allowed Elena to participate in the "reading" of the text in ways that were not possible when reading less rhythmic and patterned texts. For example, in the following excerpt, Elena assisted her father in reading the story:

R: Brauner Bär, was siehst du?

R: Ich sehen einen

E: Rote Voge

R: Roten Vogel, der mich anschaut.

[English Translation:

R: Brown bear, what do you see?

R: I see a

E: Red bird

R: Red bird looking at me.]

Given the format of these books, Elena had very few opportunities to code-switch, partly because she was primarily focused on repeating the formulaic components of the texts. The rhythm and the formulaic component of the text created a scaffold that provided her with increased opportunities to practice "reading" in a given language. Opportunities to participate in literacy events in this way may be linked to or support her language development in and across the two languages. For example, her repeated exposure to these texts allowed her to re-create texts that were read to her. Her re-creation of these texts occurred while reading with adults and while engaged in emergent readings on her own.

Elena reading/singing *The Wheels on the Bus*:

"The people on the bus go up und [and]...uhm, the people on a bus go auf [open] und [and] zu [shut], [sighs]. Open and shut. The people uhm the doors on the bus go open and shut all over town."

Text, *The Wheels on the Bus*:

"The doors on the bus go open and shut, open and shut, open and shut. The doors on the bus go open and shut, all over town."

Importance of Content of the Text

Another important topic that emerged from Bauer's (2000, 2001) work is the impact of the content read on the participation of the young bilingual. Texts that mirrored Elena's life experiences or provided her opportunities to explore different aspects of her childhood often resulted in lively discussions. In short, Elena participated differently when she was read texts that allowed her to interject her life experiences into the readings. The following excerpt from a reading of the book *Black, White, Just Right* may serve as an example. Her use of languages shows more variation when she discusses the text:

M: [text read] "Mama stares at African masks, curved figures made of wood. Papa goes for modern art, all squiggles, squares, and stretched out shapes. My choice..."

E: Ma shoes [sounds like *my shoes*]

M: Yeah.

E: Ma shoes

M: Yeah, she reminds you of the girl on your shoes [the Disney character, Esmerelda, looks to her like the Egyptian character in her text].

E: Uh hum

E: [Hitting the picture on the page] Datz [das ist] grosse [big].

M: Yeah, it's a big picture of her.

In addition to Elena connecting her life experiences with texts, the books provided her with opportunities to discuss topics that went beyond her day-to-day life experiences and vocabulary. These were the times when she was engaged in higher order cognitive thinking, and the role the adult played allowed her to stretch her understanding of the text:

R: [reading] Alles war nur noch traurig. Mein kleiner Bruder durfte im Arm von Mama liegen und an ihrer Brust saugen. Er kriegte meine alten Kleiner. Und lag in meinem Kinderwargen. Wenn ich in dem Kinderwagen liegen oder die Strampelhosen an probieren wollte, sagte Mama ich bin zu gross. Ich war ja jetz grosse Schwester. Aber ich wollte nicht gross sein. Ich wollte meine Mama wiederhaben. Der kleine Bruder musste weg!

E: Meine Bruder muss nicht weg to sein.

R: Nein? Das ist auch gut so. Ja-a, aber sie ist aergerlich, weisst du, weil die Mama nicht mehr so viel Zeit hat wie frueher fuer sie, weil sie sich jetzt auch um den kleinen Bruder kuemmern muss.

[English Translation:

R: Life was sad. My little brother got to lie in mom's arm and drink from her breast. He got all my old clothes. And slept in my stroller. When I wanted to sit in the stroller, or try on the baby pants, mom said I was too big. After all, I was a big sister now. But I didn't want to be big. I wanted to be little. I wanted my mommy back. The little brother had to go!

E: My brother doesn't have to go.

R: No? That's good. But, she was angry, you know, because her mom didn't have as much time for her as she used to, because she had to take care of the little brother too.]

It is clear from Elena's response that she could see the similarity between her own life experience (having a baby brother) and that of the main character. She could also see that her response to that event was qualitatively different from the main character, and she voiced that opinion. We clearly see her reflecting on the event during the reading. Her father provided the clarification that helped Elena to better understand why the character felt as strongly as she did.

Language Choice During These Events Are Not Random

Another important point that emerged from the work with Elena is that her code-switching does not reflect a lack of control over the two languages. In fact her code-switching suggests that she is aware of her two languages and uses them to meet her needs. For example, during a reading of the book *Black, White, Just Right*, she pointed out to her mother that the young biracial little girl on the dedication page reminded her of her mother. During this segment of the discussion, Elena interacted with her mother in English:

E: Dis [this] mommy [looking at the little girl]

M: Who, the little girl?

E: Dis [this] mommy!

M: [Laughs]

E: Dis [this] mommy, dis!

M: You think she looks like me? We have the same coloring.

Other times Elena would use her German with her mother although she knew that English was the language of their interaction. For example, near the end of the book *Black, White, Just Right*, the main character is shown on her father's shoulder. This prompted Elena to talk about her own experience:

E: Like Mein dahdy [like my daddy].

M: Did your daddy put you on his shoulder?

E: Ja, an hoch [yes, and high]

M: Were you feeling really tall?

E: Ya [yes].

What is interesting about these types of code-switching is that some of them seem to be linked to the connection she was making between the character and the people in her life. For example, she shares an experience she had with her father in the language that is associated with him, German, which suggests there may be a great deal more to the way that young bilinguals respond to books. The systematic nature of Elena's code-switching also raises the issue of her overall awareness of her two languages. That Elena used two language codes during her interactions with adults did not imply metalinguistic awareness. It was only because of her systematic and context-specific uses of language that metalinguistic awareness can be deduced.

Setting a Research Agenda

In order to establish a sound research agenda for early reading development for young bilinguals, it is important to note that we have little research data on this topic. Research findings from Bauer's (2000) study suggest that we must empirically investigate the position that oral language must precede literacy development, our understanding of young bilinguals' metalinguistic awareness and development, and the nature of book interactions with young bilinguals. Each will be addressed in this section.

Early Literacy Development

In the literature on young bilinguals, there exists little exploration of literacy from an emergent literacy perspective. Yet much of the research with monolinguals suggests that a variety of opportunities exists for children to experience and interact with print prior to entering school. According to a joint position statement by the International Reading Association and the National Association for the Education of Young Children (IRA & NAEYC, 1998), young children move through a series of developmental reading and writing stages that include awareness and exploration, experimental, early, transitional, and independent and productive. Certainly, one would expect to see children in the preschool years developing awareness of the literacy practices that surround them, participating in early exploration, and experimenting with print as their oral language skills continue to develop.

Given the fact that bilinguals have two languages at their disposal to use, what might their early attempts and exploration with print tell us about the role of language in these interactions? In the area of reading, we have little research in the United States beyond Bauer's study that addresses this issue. If we are to better serve the growing number of bilingual students in this country, we have to engage in research investigations that will help us better understand the early literacy development of these children. Bauer's (2000) work suggests that just looking at what these children can do in one language is misleading, and attention must be given to how both languages influence and shape literacy.

Metalinguistic Awareness

Another area that needs further exploration is metalinguistic awareness. Earlier in the chapter, I mentioned that much of what we know about early literacy development of bilinguals comes from this small body of work on bilinguals' metalinguistic awareness. Although we know that bilinguals may have enhanced abilities, we have only documented the existence of these skills. We know little empirically about how these skills develop.

There is empirical support for the position that the presence of metalinguistic awareness has implications for early reading (Titone, 1985). However, metalinguistic awareness is only studied as it pertains to words or syntax (e.g., at the micro level of understanding text and being "literate"). Global aspects of literacy and understanding text (such as the concept of print, story, and summarizing), and the metalinguistic awareness supporting these aspects cannot be analyzed, tested, or even detected in this way. Therefore, we need studies that will further investigate the variety of metalinguistic awareness that may influence the way bilinguals approach early reading events.

Book Interactions

Elena's responses to the different texts read to her differed according to format and content.

She engaged in repeating the exact phrase from the highly structured texts, and engaged in more meaning making and higher order thinking when interacting with texts that mirrored her life in some way. An issue raised by Bauer's (2000) study that is new and worth exploring with a variety of young bilinguals is the possible relationship between linguistic identity and children's responses. Again, this type of research would place the emphasis not on solely trying to replicate what we know about monolinguals with bilinguals, but trying to understand the interrelation between their bilingualism and their early responses to texts.

In order to fully explore connection between young children's bilingualism and storybook responses, we must look at a variety of text formats and genres. We need to investigate what happens when young bilinguals have opportunities to hear or see their languages used in print. These narratives provide them with accumulative experiences (Rosenblatt, 1983) that can help them make better sense of their lives.

In summary, a great need exists for research that will explore the intersection of young children's bilingualism and early reading development. Currently, we can only speculate about the early reading development of these children because we have insufficient data. Understanding these children's early reading development will not only better assist educators in meeting the needs of bilingual children, but also may help us to reconsider and re-envision what we understand about language and early reading in general.

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CHAPTER 2

Enhancing Emergent Literacy With Spanish-Speaking Preschoolers in the Inner City: Overcoming the Odds

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THIS CHAPTER focuses on children growing up bilingually. In this context, the language of the home is Spanish and the language of preschool is, for the most part, Spanish. The issue of comprehensive preschool interventions is treated in the literature review, and the authors report a study in which a multifaceted intervention was implemented that involved altering the preschool classroom and curriculum in a number of ways: (1) by providing play areas with materials that encouraged "literacy" play; (2) by increasing the amount of both Spanish and English print available to the children; (3) by working alongside teachers to introduce teaching practices such as shared book reading; and (4) by involving parents through the use of a free lending library. Although Yaden and Brassell caution that the findings are preliminary, the results of the intervention on children's concepts of print in Spanish are very encouraging. The necessity for a comprehensive approach to instruction and the constraints on time, space, and personnel are indicative of the issues for implementing comprehensive reading instruction across the grade levels.

Introduction and Background

Improving all students' literacy achievement is a top priority in education. While elementary and secondary schools struggle to enhance students' reading and writing skills to higher levels needed to succeed in a technologically advanced society, early childhood education programs are being reexamined for practices that can strengthen students' literacy before they enter kindergarten (August & Hakuta, 1997; Bowman, Donovan, & Burns, 2001; Shonkoff & Phillips, 2000; Snow, Burns, & Griffin, 1998; Yaden, Rowe, & MacGillivray, 2000a). This chapter will describe an emergent literacy intervention that has attempted to be responsive and sensitive to the social and cultural resources that exist within the community, home, and school in order to increase the literacy learning of 4-year-old children, Spanish-speaking

preschoolers in an inner-city child-care center. The primary purpose of the 4-year, longitudinal project was to provide multiple opportunities for the 4-year-old children in two preschool classes to engage in a variety of culturally sensitive and developmentally appropriate reading and writing activities within the center, at home, and in the surrounding community. More specifically, the questions guiding the programmatic intervention included the following:

- How do emergent literacy activities influence the Spanish and English literacy learning abilities of preschool children in an inner-city community child-care setting?
- What kinds of English language and literacy support can be provided by teachers in a primarily Spanish-speaking community?
- What is the nature of the literacy environment resulting from this sort of collaboration in this setting?
- How can the community's and teaching staff's "funds of knowledge" be incorporated into a structured preschool emergent literacy program?

Changing Demographics in the United States

At the time of this writing, the continued, rapid growth of peoples identifying themselves as having a Hispanic origin has been recently documented by the U.S. Census Bureau (2000), described in detail in academic literature (e.g., Darder, Torres, & Gutiérrez, 1997; Fuentes, 1997; Gonzalez, 2000; Guerra, 1998; Gutierrez, 1995; Ruiz, 2000; Sánchez, 1993) and impressed repeatedly on the public consciousness by the major print media (e.g., Gibbs, 2001; King, 2001; Yeoman, 2000). The most recent census data (U.S. Census Bureau, 2000) indicate that the general Latino population in the 50 states has now become the largest minority group in the United States (12.5%), slightly surpassing African Americans (12.3%). Future estimates, according to Gonzalez (2000), are that by mid-century, one out of every four persons in the United States will claim a Latino heritage.

More relevant, however, to the conduct of the present study are the statistics describing growth in Southern California and Los Angeles County where the investigation has taken place. For it is in this region, having the largest concentrated population of Spanish-speaking peoples in the country, that the problems of rapid population growth and the impact on housing, job opportunities, and schooling are particularly manifest and pressing on social service and educational institutions in the area.

The Demographics of Southern California and Los Angeles County

According to recent studies by the Southern California Studies Center and the Brookings Institution Center on Urban and Metropolitan Policy (2001), during the last two decades in metropolitan Los Angeles, the Latino population has doubled while the Anglo population has remained the same. Second, and conversely, the income levels of whites and people of color are reverse of the population figures. In the five county areas that make up the Southern California region (Los Angeles, Orange, Riverside, San Bernadino, and Ventura counties), the average yearly income levels for Anglos increased steadily over the past 20 years, while those of Latinos as well as African Americans have decreased over the same period

(Southern California Studies Center, 2001, p. 20).

Additionally disturbing is the finding that the number of "working poor" in metropolitan Los Angeles is increasing much more rapidly than the population at large. For example, between 1990 and 1998, while the region's general population grew by 16%, the population of persons in working households (where at least one person works full time) increased 51%. Given that housing prices are increasing faster than household income in the area, statistics provided by the U.S. Department of Housing and Urban Development show that "48% of poor renters in the region must pay either more than half of their income for rent or live in an extremely inadequate housing unit" (Southern California Studies Center, 2001, p. 22). Given also the high monthly cost of infant care ($595.00) and preschool ($462.00) expenses to working parents in the region (Los Angeles County Children and Families—First Proposition 10 Commission, 2000), disposable income for books, transportation to extracurricular activities, or money for parents to improve their own education is extremely difficult to come by.

Obstacles for Public Education in Southern California

Despite both federal and state initiatives to improve preschool and primary academic achievement in particular, the challenges for educators in Southern California are daunting. For example, using data from the October 1999 Current Population Survey (CPS), a monthly, nationally representative survey of 50,000 U.S. households conducted by the Census Bureau for the Bureau of Labor Statistics, the major "personal" and "familial" risk factors for students between the ages of 5 and 17 include (a) a lack of English proficiency, (b) the presence of a personal disability, (c) school retention, (d) absence of either or both parents in the home, (e) at least one foreign-born parent of recent immigration, (f) low family income, and (g) the absence of any employed parent or guardian in the household (Kominski, Jamieson, & Martinez, 2001, p. 4). Unfortunately, in the particular area of the city of Los Angeles where the majority of the sample population for the present study reside, most of these risk factors loom large.

According to data collected by United Way of Greater Los Angeles in 1998–1999, 100% of the children's families in the area were below 75% of the state median income, with 40% of the population classified as living in extreme poverty. In addition, 30% of the school-aged children in Los Angeles County schools are classified as "Limited English proficient," with over 50% of the entering kindergartners classified as "English Learners" (Los Angeles County Children and Families First Proposition 10 Commission, 2000). Other estimates suggest that over 30% of children live in single-parent households, adult unemployment runs as high as 14%, and approximately one out of every two adults in a household is of recent immigration (Southern California Studies Center, 2001).

In summary, combined with the many other pressures on urban living such as maintaining an adequate and pure water supply, ensuring protection against natural disasters such as fire, flood, and earthquakes, creating a safe living and working environment, and creating a governmental infrastructure able to sustain an adequate level of social and civic services, both new immigrants and many native-born citizens of Hispanic descent living in the inner cities of the

Los Angeles metropolitan basin face severe challenges in providing for themselves as well as their families' future. Nonetheless, despite these harsh realities, I want to emphasize in the following description the intellectual and social resources that existed for the present sample of inner-city children to draw on from within their families and community.

Emergent Literacy Interventions With Parents and Children

Because much of the literature on emergent literacy interventions with both single and multiple components has been recently reviewed (Labbo & Teale, 1998; Whitehurst & Lonigan, 1998; Yaden et al., 2000a), only the principle findings from a few representative studies will be summarized in the following sections.

Single-Component Programs

Several early literacy intervention studies have focused their efforts on providing more books in the homes of low-income families and in providing increased exposure to storybook-reading activities in the classroom. For example, in a series of studies aimed at encouraging parent-child and teacher-child book reading using the *Little Books* program, Mason and colleagues (Mason, Kerr, Sinha, & McCormick, 1990; McCormick & Mason, 1990; Phillips, Norris, & Mason, 1996; Phillips, Norris, Mason, & Kerr, 1990) found that increasing the opportunity for involvement in more storybook reading at home led to steady progress toward higher emergent reading levels in preschool and kindergarten Head Start children during the first years of the intervention. Similarly, in a study with Canadian children, Phillips, Norris, and Mason (1996) found that early gains in literacy were also sustained into the fourth grade as measured by standardized tests.

Further, Whitehurst, Epstein, et al. (1994) incorporated a book-lending library at four Head Start centers in order to facilitate an at-home reading program in which parents were encouraged to read with their children at least three times a week over a nine-month period. The study also included classroom storybook reading and instruction in phonemic awareness. It was found that children increased on measures of expressive and receptive vocabulary when their caregivers actively read with them at home.

In a study particularly relevant to the population of the present investigation, Goldenberg, Reese, and Gallimore (1992) distributed simple, predictable books (*Libros*) to 16 families whose primary language was Spanish. Interestingly, although the authors reported that literacy scores improved overall for the children involved, frequency counts and duration of use measures for interactions with the books at home did not correlate with school achievement scores. Goldenberg and colleagues concluded, therefore, that perhaps the quantitative measures failed to capture the qualitative aspects of the children's book reading "activities that ultimately influenced their school performance" (p. 528).

Multiple-Component Emergent Literacy Programs

More commonly, however, researchers are recognizing that any long-term impact on students' literacy achievement is dependent on a context in which children have access to a network of supports related to reading and writing behaviors. For example, in a two-year study with primary grade children, Englert et al. (1995) reported that the increased writing, reading

comprehension, and metacognitive knowledge scores for students in the program could not be associated with any one facet of the program. Rather, the researchers stressed that (a) the holistic nature of the learning experiences, (b) the teachers' "ownership" over time of the projects' principles and curriculum, and (c) the sense that a "literate community" was established between students, teachers, and the wider community were crucial components in making their program a success. Similarly, in a 23-week emergent literacy program implemented in 19 nursery schools in rural South Africa, Kriegler, Ramarumo, Van der Ryst, Van Niekerk, and Winer (1994) reported that a treatment group of 21 nursery-school children, although 8 months younger than the comparison groups, increased their knowledge of book handling, word recognition, and print more than children not participating in these activities. For this particular project, Kriegler et al. stressed that achievement gains were coupled with the fact that (a) indigenous cultural values were incorporated into the curriculum, and (b) teachers and primary caregivers conducted activities related to storytelling, storyreading, and informal engagement with written materials in the children's first language (Zulu).

Summary

In short, the key features shared particularly by the comprehensive programs (for other examples, see also Nielsen & Monson, 1996; Otto, 1993; Sulzby, Branz, & Buhle, 1993) included (a) drawing children in as socially competent partners, (b) allowing them to experiment with print without undue duress, (c) providing them with a variety of adult- and peer-mediated dialogue about literature and ways to read and write, and (d) creating any number of opportunities for them to practice their unconventional yet emerging skills in reading and writing.

However, two features of the above studies and others involving parents in book reading activities (see e.g., Dickinson & Tabors, 1991; Otto, 1993; Whitehurst, Arnold, et al., 1994) may relate to the "quality" issue that Goldenberg et al. (1992) found to be so elusive to measurement. First of all, nearly all of the studies used books with very simple, predictable text conducive much more to word recognition and letter-sound activities than to more literary experiences (cf. Sipe, 1998; Wolf & Heath, 1992, for examples of the latter). Interestingly, Otto (1993) found that kindergarten children who were exposed to traditional picture storybooks as opposed to predictable texts had a better understanding of complex language forms and demonstrated higher emergent reading levels on Sulzby's (1985, 1994) *Emergent Reading Scale* than their counterparts' reading of simplified texts.

Second, although parent involvement was a central component of the intervention, their involvement can be described in what Swap (1993) has termed the "School-to-Home Transmission Model," where training in school-related tasks is seen as more important than a consideration of the "home curriculum" (cf. Delgado-Gaitan, 1990, 1993; Delgado-Gaitan & Allexsaht-Snider, 1992; Delgado-Gaitan & Ruiz, 1992, for a detailed discussion of this issue). In other words, parents in almost all of the above cases had no choice of the books that were sent home, nor did they control the number received or the frequency with which they arrived. In addition, in the Whitehurst, Epstein et al. (1994) study, texts were altered to include glosses that added "hints for *wh-* prompts on each page and hints for recall prompts at the back of the book" (p. 547), thus eliminating the

spontaneity characteristic of most parent-child storybook reading.

Although the fact remains that many storybook-reading interventions involving parental reading components almost always show short-term and some long-term gains (e.g., Bus, van Ijzendoorn, & Pellegrini, 1995; Goldenberg, Reese, & Gallimore, 1992; Phillips et al., 1996; Yaden et al. 2000a, for reviews), parents usually have very limited control over their role in the "partnership" other than compliance to a preset research design.

An Emergent Literacy Intervention Model for Children in the Inner City

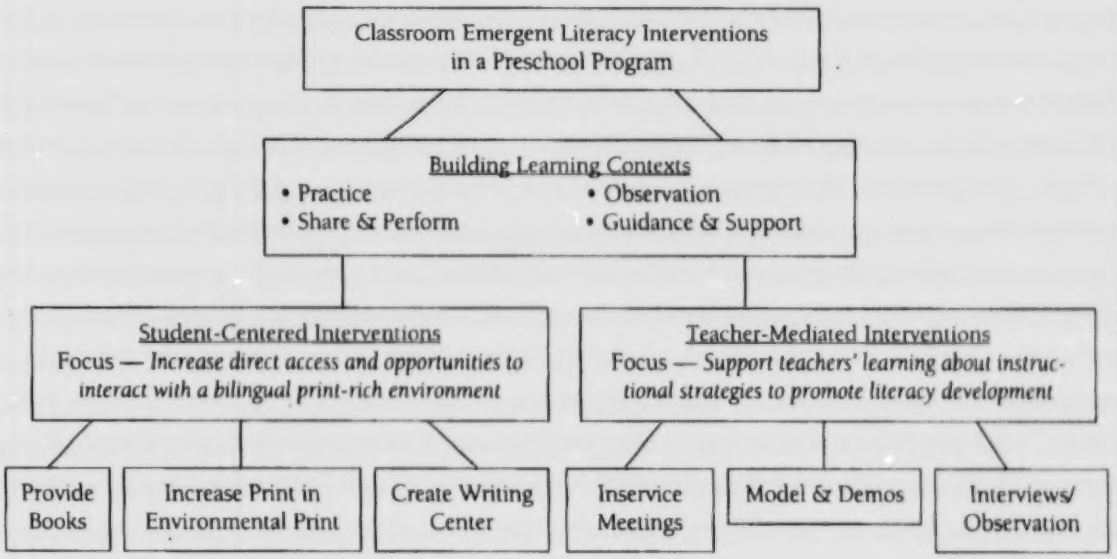
Although the term *emergent literacy* has been subject to varying definitions (Yaden et al., 2000a), the present project adhered to a developmental and constructivist view of emergent literacy—one that acknowledges the continuous development of literacy from birth through interaction with others and in an environment where print and literate behaviors are ubiquitous. Based on this developmental view, emergent literacy activities are embedded in the sociocultural contexts of home and community, as well as in the more formal instructional contexts represented in schools. In an attempt to address particularly the more formal contexts in this study, literacy interventions in the classroom were organized into the following categories: (a) student-centered interventions, which emphasized students' self-initiated engagement in literacy events; and (b) teacher-mediated interventions, which recognized the important role of the teacher in modeling, guiding, and supporting students in meaningful reading and writing interactions. These components and relationships are depicted in Figures 1 and 2.

A third component of the intervention was a book-lending library particularly designed to accommodate the schedules of working parents and established on site at the preschool. The book loan program was modeled on the principles of collaboration such as those outlined in programs like the Carpinteria Family Literacy Project (Delgado-Gaitan, 1990, 1993, 1996), the "funds of knowledge" approach (Moll, 1994, 1998; Moll, Amanti, Neff, & Gonzalez, 1992; Moll & Greenberg, 1990), and other types of home-school partnerships such as those described in Baker et al., 1996. These types of programs, alternatively called "Cooperative Systems" models (Delgado-Gaitan, 1990, 1993) or "Partnership" models (Swap, 1993) are committed to the viewpoint that all partners in the educational process—teachers, children, parents, family—have indispensable and positive contributions to make in ensuring academic success. Because this particular program has been discussed in detail elsewhere (e.g., Madrigal, Cubillas, Yaden, Tam, & Brassell, 1999; Yaden, Madrigal, & Tam, 2001), readers are encouraged to consult those sources, if interested, for additional information.

Student-Centered Interventions

The initial focus of the emergent literacy intervention was to promote opportunities for students to have direct access to literacy materials and activities that provided enriched opportunities for them to construct their own understandings of reading and writing. In the context of the intervention, these activities included (a) making multiple copies of books in English and Spanish available in both the class library and parent book loan program; (b) increasing

FIGURE 1
Principles and Instructional Components of an Emergent Literacy Intervention Model


Classroom Emergent Literacy Interventions in a Preschool Program
Building Learning Contexts
• Practice
• Share & Perform
• Observation
• Guidance & Support
Student-Centered Interventions
Focus — Increase direct access and opportunities to interact with a bilingual print-rich environment
Teacher-Mediated Interventions
Focus — Support teachers' learning about instructional strategies to promote literacy development
Provide Books
Increase Print in Environmental Print
Create Writing Center
Inservice Meetings
Model & Demos
Interviews/ Observation

Yaden, D.B., & Tam, A. (2000). *Enhancing emergent literacy in a preschool program through teacher-researcher collaboration* (CIERA Report #2-011). Ann Arbor, MI: Center for the Improvement of Early Reading Achievement. Reprinted with permission.

bilingual environmental print (including labels, charts, and a word wall) in the classroom; and (c) developing a writing center containing a variety of writing supplies, including pencils, markers, envelopes, "sticky notes," and an assortment of paper. In addition, the presence of sociodramatic play areas in each classroom (e.g., kitchen, dress-up, blocks) complemented student activity at the writing center as the students used writing center materials to label and read or write as they engaged in creative and imaginative role-playing (cf. Neuman & Roskos, 1991, 1997; Rowe, 1998).

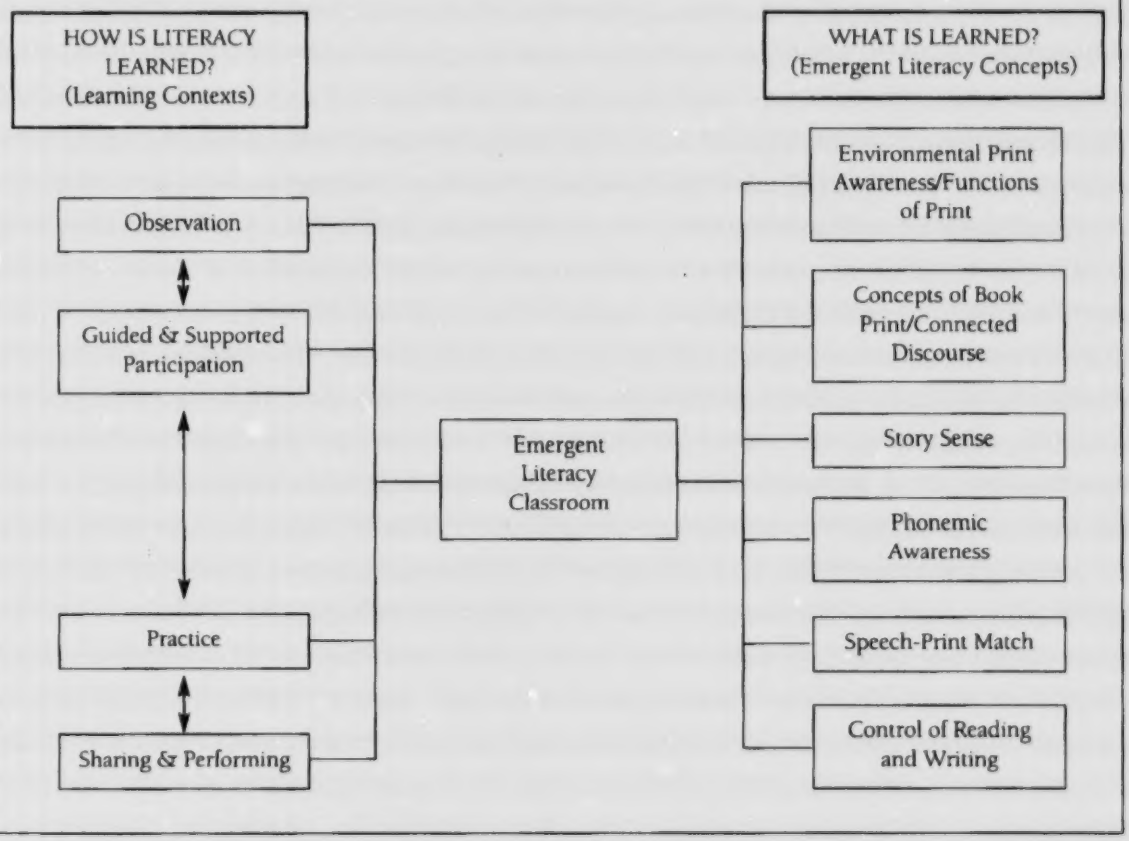
Teacher-Mediated Interventions

Though a print-rich learning context in the classroom is important, its impact can be enhanced or weakened through the key role played by the teacher. As outlined by Strickland and Morrow (1989), children construct their knowledge about print and their strategies for reading and writing not only from their independent explorations of written language, but also from interactions with parents and other literate persons, and from their observations of others engaged in literacy activities (see also Holdaway, 1979, 1980). Therefore, the teacher plays a critical role in modeling literacy behaviors, enhancing access to meaningful literacy activities, and creating stronger links between home and school to promote literacy learning. Hence, the emergent literacy intervention incorporated a strand devoted to supporting teachers as they, in turn, supported the literacy growth of their students and encouraged the parents to promote literacy outside the school.

One primary focus of the teacher-mediated intervention was the use of Big Books for shared reading. By participating in a shared reading experience, the students observed a proficient reader and joined in to read familiar text, which encouraged understanding of concepts of print such as directionality, parts of a book, and a sense of word/letter/sentence. Other mediated intervention activities focused on writing as teachers modeled written retellings of field trips, classroom activities, or topics suggested by the children and, subsequently, helped the students record their own versions of these activities. Figure 2 displays the instructional model implemented in the study and the principle themes of focus (cf. Lipson & Wixson, 1997) throughout the year.

In summary, an important focus of the research project was to reevaluate how the intervention "fit" into this particular setting while keeping in mind that the emergent literacy behaviors developed needed to have significance in the schooling context these students would enter as kindergartners. For instance, while the vast majority of children spoke Spanish as their primary language and received mostly Spanish language instruction in the child-care setting, they entered kindergarten in English-only classrooms where only in select cases was primary language support provided. Therefore, the

FIGURE 2
Principles of Delivery and Curricular Themes



planned intervention needed to consider the role and use of two languages both prior to and during public schooling.

Methodology

Population Description and Setting

Located east of downtown Los Angeles in an area known as "skid row" (Rivera, 1999), Para Los Niños (PLN) is a comprehensive child-care center and family-services support center whose stated mission is "raising children out of poverty into a brighter future" (Para Los Niños Annual Report, 1999/2000). The child-care center itself houses approximately 136 children, from infants to 4-year-olds. For the most part, the parents of these children work in the nearby garment and toy wholesale districts where the normal working day is at least nine hours and wages as low as US$2.00 per hour. In addition, approximately two thirds of the families live in areas of the city where there is a high concentration of gang activity. Further, according to agency figures, over 60% of the families served are single mothers with three to four children, supporting their families on average monthly incomes ranging between $584 to approximately $1,050. Not surprisingly, over 98.7% of families have incomes below federal poverty guidelines, with 35% of the children prenatally exposed to drugs or alcohol and a substantial number considered to be at risk for abuse or neglect. Finally, for the four-year duration of the study, the great majority of the children in the program were Latino, with usually only one or two African American or white students enrolled per year. Although Spanish is the primary language of communication in the classroom, teachers and paraprofessionals regularly code-switched into English for the few children who were bilingual or speaking English only.

For each of the four years of the study, the classroom intervention was conducted in the two classrooms of the 4-year-old children, ranging from 50 to 55 students each year. Age ranges of children spanned from 45 to 57 months, with the overall average being approximately 51 months, with most children turning 5 years old throughout the fall and spring. This population was very stable during each year of the program with no more than approximately a half-dozen children leaving in any one year. Although the structured intervention activities were only conducted in the two classrooms of 4-year-olds, all parents and children in the toddler class (12 to 14 children each year) and in the two classes of 3-year-old children (approximately 50 to 55 children per year) were allowed to check books out from the lending library.

Finally, each classroom normally had a lead teacher, an associate teacher, and several rotating aides, all of whom were Latino/a with the exception of one lead teacher who was Korean. During the four years of the study, the research team worked with four lead teachers (who had an associate's or bachelor's degree) and approximately six to eight teacher aides as well. Although two of the four lead teachers left before the study ended, most of the aides remained, although with changing instructional assignments each year either between 4-year-old classes or those of younger children; full participation for any of them was precluded.

The Emergent Literacy Intervention Procedures

Drawing on the principles mentioned earlier and an extensive early literacy research base (e.g., Bredekamp & Copple, 1997; Hammond &

Raphael, 1999; Hiebert & Raphael, 1998), the intervention included instituting a Big Book shared reading program, installing writing centers, and purchasing over 1,000 children's books for both the book-lending library and the two 4-year-old classrooms. Additionally, graduate student members of the research team provided in-classroom support, feedback, and modeling at least twice a week throughout the school year classroom, as well as ongoing, monthly inservices regarding emergent literacy theory, instructional activities, and developmental growth patterns in reading and writing for child-care agency teachers and paraprofessionals.

For the most part, the intensive instructional portion of the program took place from 9:00 a.m. to 11:00 a.m., depending on recess schedules. During this time many of the teacher-mediated activities described took place as well as modeling or team teaching by the graduate researchers. However, because the center opened at 7:00 a.m., a majority of the children were able to independently interact with the books and writing materials prior to the official opening of the school day at "circle time." In addition, the children also had access to these materials between the end of naptime (3:00 p.m.) and the time they were picked up (5:00 p.m.).

Finally, as mentioned earlier, a parent book-lending library was open two days a week and parental workshops on reading aloud at home and other ways to encourage children's awareness and knowledge of literacy materials and activities were included each semester at fall and spring parent receptions.

Design

The plan of the study can be characterized as what Cook and Campbell (1979) have termed a quasi-experimental, "institutional cycles" design (p. 132) where several, nonequivalent (i.e., nonrandomized) groups of participants experience a similar "treatment" in a common environment at different intervals of time (in this case, yearly cycles). As demonstrated in Table 1, the longitudinal, cross-sectional design included four preschool cohorts of children who were to be followed into elementary school for further observation and comparison. In addition, a 1996–1997 cohort of 4-year-olds, who graduated one year before the onset of the intervention, was to be created from archival records and used as a nonequivalent, no-treatment comparison group. Unfortunately, due to misplaced as well as missing data in the archival records, this group was not able to be constructed.

However, because the actual classroom intervention did not begin until January 1998 and major renovation in the center for the next four months frequently displaced children from their regular classrooms, the 1997–1998 group of 60 preschool children experienced a partial exposure to the classroom intervention at best. Further, during this start-up year, the parent book-lending library was not in operation either. Therefore, this first group of children (Cohort 1) was redesignated as a partial treatment group (cf. Cook & Campbell, 1979, on "weak treatment"groups and treatment partitioning, pp. 128–129).

Finally, during the last year of the study (2000–2001), the agency opened a new preschool site a few miles away, which served the same population as the site where the intervention was being implemented. In agreement with agency administration, it was decided that the emergent literacy intervention would not be implemented at this new location for the first year of operation. Subsequently, this intact class of 20 children was used as a nonequivalent, no-treatment group (Cohort 5).

TABLE 1
A Longitudinal, Institutional Cycles Design With Non-Equivalent, Partial-Treatment, and No-Treatment Groups

Year	1997–1998	1998–1999	1999–2000	2000–2001
Cohort				
1[a]	PLN-4s	K–9th	1st–9th	2nd–9th
2		PLN-4s	K–9th	1st–9th
3			PLN-4s	K–9th
4				PLN-4s
5[b]				PLN-4s

Notes:
PLN-4s = Successive preschool cohorts. 9th = Grade placement at Ninth Street Elementary School.
[a]Designated as a partial treatment group at the end of the year.
[b]A new cohort of preschoolers at a newly opened site not receiving any form of literacy intervention. Designated as a no-treatment control group at the beginning of the year.

Data Collection

Documentation of growth in concepts about literacy was measured in several ways. First, in the classroom, data sources included children's writing products, photographs, video, and detailed field notes of individual and group literacy behaviors. Second, pre- and posttesting of all cohorts was carried out with the 25-item, Spanish version of the *Concepts About Print Test* (CAPT) (Escamilla, Andrade, Basurto, Ruiz, & Clay, 1996). Despite the widespread popularity of the test, Clay (1993) has maintained that the test items are not constructed to represent a developmental sequence, nor are the results to be used in isolation for making placement decisions of any type. However, an earlier factor analysis of the test by Day and Day (1986) has shown that the test items generally fall into four distinct construct groups (book orientation, concepts of directionality, letter/word concepts, and advanced print abilities), which represent increasing levels of conceptual difficulty. Further, previous studies (Johns, 1980; Yaden, 1982) using the English version of the test with first graders have shown that it strongly predicts performance on standardized readiness and achievement tests even with intelligence statistically controlled (Yaden, 1984, 1987). Thus, given the normalized scores (stanine groups) that have also been provided for both the English and Spanish versions with smaller populations of children in New Zealand and the United States, the test stands up as a reasonably robust measure of a child's increasing knowledge of print concepts and conventions. Further, it is still one of the few normed tests for very young children that is available commercially.

Third, adaptions of several Piagetian clinical measures previously employed by Ferreiro and Teberosky (1982) were administered to document children's developmental growth in acquiring written language concepts. The measures used were (a) name writing and interpretation (i.e., portions of the name were covered with an index card and the child was asked to interpret the remaining string of symbols); (b) a general writing task where the children were asked to write their own name, those of family mem-

bers, some familiar words, and a sentence; (c) a word awareness test where the child was asked to read one string of letters adjacent to a picture of an object; and (d) a sentence awareness measure where the child was asked to interpret as least two lines of print adjacent to a picture depicting several objects (e.g., a boy in a boat fishing near an island). Finally, archival records and test scores from the children's elementary experiences were also collected.

In addition, various questionnaires were distributed to both parents and teachers at the preschool throughout the study, and both formal and informal interviews were conducted regularly to ascertain teachers', parents', and administrators' ongoing perspectives and feelings about the progress of the program. Finally, during the last three years of the project, one Latina member research team conducted home visits to capture the literacy activities in which parents engaged with their children.

Analysis

While a partial, statistical analysis (ANCOVA) of the first three cohorts' pre- and post-CAPT scores at the end of preschool has been conducted recently (see Brassell, 2001), only descriptive measurements and graphical analysis will be reported here. Second, because analysis on the Piagetian clinical measures is still ongoing, and although a few aspects of the subsequent kindergarten and primary grade performance in one elementary school on tests of letter name/sound recognition and other school-administered test measures have also been collected and partially analyzed for the first three cohorts (see Yaden, 2001; Yaden, Tam, et al., 2000), the following discussion will be limited to results related to the Spanish version of the *Concepts About Print Test* (Escamilla, et al., 1996) through the end of preschool, albeit for all five cohorts.

Therefore, the following CAPT scores are from the two control groups mentioned previously (Cohorts 1 & 5), and three experimental groups (Cohorts 2–4) who experienced all of the intervention components, participating in both classroom and parent book-lending library experiences. However, readers are cautioned that full data analysis for all years, cohorts, and data sources has not been yet completed; and, therefore, the results and conclusions reached at the time of this writing should be viewed as preliminary. We are hopeful that a more thorough analysis of the larger group receiving the preschool intervention (approximately 200 children) and their experiences in all of the elementary schools attended will follow in the not-too-distant future as time and resources allow.

Selected Findings

Control Cohort Descriptions

Table 2 and Figure 3 display the results for all five preschool cohorts both tabularly and graphically. There are special circumstances that need to be mentioned, however, regarding the total numbers of children in Cohorts 1 and 5 from whom scores have been recorded. Although pretest scores were collected for the 36 total children in Cohort 1 in January 1998 at the intervention's inception, due to the research team members' unfamiliarity with the rapid attrition and transferring of children both into and out of the center during the summer months, numerous children from this first group began to leave the center immediately after the June 30 preschool graduation before a complete set of posttests could be administered.

Therefore, the 17 preschool children whose scores are reported in Table 2 are the subset of children who also went into kindergarten at the participating elementary school. It is noteworthy, however, that the average pretest score (4.25) of this subset of 17 preschoolers was actually higher than the mean pretest score for the whole class of 36 (3.88). Therefore, this subset of 17 children in Cohort 1, being in the partial treatment condition, represented the highest performing children in the first group, who are compared to subsequent cohorts. Their posttests were administered at the beginning of their kindergarten year.

Additionally, although there were 20 children initially enrolled in what was supposed to be a 4-year-old class in the new preschool site (Cohort 5), it was discovered later when verifying ages that it was actually a combined 3- and 4-year-old class, and only 11 students could be classified as being in the 4-year-old range. Further, during posttesting, either due to refusals or absences, only seven students remained having taken both pre- and posttests. We realize, therefore, that this group cannot be viewed as a robust, no-treatment cohort, and that their scores cannot be reliably analyzed with inferential statistics. Nonetheless, as a result of observations on site at the new location that indicated that there was an almost total absence of exposure to print, reading and writing activities, or both, we present their CAPT scores as being "suggestive" of the performance of a larger number of children in this same situation, if compared to other groups of children immersed in a rich literacy environment undergoing continual interaction with teachers who support their nascent experiences with literacy materials and behaviors.

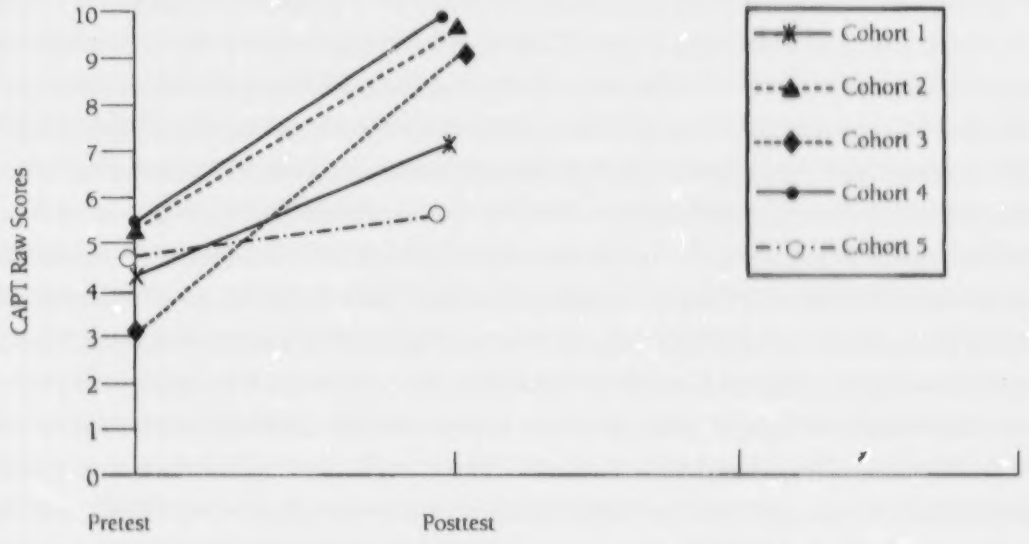
TABLE 2
Raw Scores on the Concepts About Print Test for All Five Preschool Cohorts

Group	Year[a]	(N)[b]	Pretest	(Std. Dev.)	Posttest	(Std. Dev.)
Cohort 1[c]	1997–1998	(17)	3.14	(2.72)	6.42	(2.60)
Cohort 2	1998–1999	(50)	4.24	(2.19)	8.76	(2.85)
Cohort 3	1999–2000	(49)	3.04	(2.07)	8.50	(3.10)
Cohort 4	2000–2001	(42)	4.95	(2.21)	9.22	(2.72)
Cohort 5[d]	2000–2001	(7)	4.66	(2.31)	4.89	(2.14)

Notes:
[a]The calendar preschool year officially began on July 1 and ended June 30 of every year. The full preschool program, however, as well as the emergent literacy intervention operated from September through June of each year.
[b]Only children with both pre- and posttest scores are included.
[c]Cohort 1 is comprised of the subgroup of preschool children who also went to kindergarten in the nearby elementary school participating in the study. The other 19 preschoolers who attended other schools are not represented. Cohort 1 was designated as an on-site, partial-treatment group.
[d]Cohort 5 was an off-site, no-treatment group. Only the scores of the 4-year-olds with both pre- and posttests are represented.

FIGURE 3

Pre- and Posttest Comparisons of Three Experimental Cohorts (2–4) and Two Control Cohorts (1 & 5) of Preschoolers Over Four Years on the *Concepts About Print Test*



Cohort Comparisons Over Four Years

Figure 3 depicts the difference in pre- and posttest performance for all five cohorts. As can be seen clearly, the three experimental groups experiencing the full intervention scored considerably higher than both of the control cohorts, with the partial-treatment cohort scoring slightly higher (6.42) than the no-treatment control (4.89), but still a full two points lower than the lowest experimental group (8.50). Unfortunately, norms provided for the Spanish version of the CAPT (see Escamilla et al., 1996, p. 78) do not include standard scores for either a sample group of preschoolers or kindergartners, but only for first grade, Spanish-speaking students in Arizona, Illinois, and Texas. Nonetheless, according to these norms, all three experimental cohorts at the end of the preschool year scored nearly or solidly in the fourth stanine (raw score 9), as high as first graders would be expected to score at the beginning of first grade.

Further, extrapolating from a scale of age expectations (see Clay, 2000, p. 11), based on a 50% passing rate of items for the average European child between the ages of 5 and 7, the experimental cohorts of preschoolers in this study were passing the first 11 items (book orientation and directionality tasks) as well as the more advanced items (recognizing periods, question marks, capital letters, letter and word boundaries) anywhere from six months to a year-and-a-half before their English-speaking counterparts.

Discussion

The results of this study are consistent with the findings of other investigations that have implemented emergent literacy interventions or introduced similar activities with groups of children termed "at risk." The study also supports the conclusions of researchers (see Labbo & Teale, 1998; Yaden et al., 2000a) that these types of activities reach across a wide range of children and their families and facilitate the acquisition of knowledge about the written form of language in many scripts and tongues. Of the many lessons, issues, and questions that framed our own consciousness as researchers as to what was transpiring as the study moved forward, the following stand out as being particularly relevant to our experiences in the classrooms with the children and their teachers.

What Does It Mean to Collaborate?

As a university research team, although we entered the child-care center with a clear theoretical framework and preplanned instructional strategies that we thought appropriate based on our own prior experiences and knowledge of the literature, we had little awareness that the methods we were to employ and that had worked in what we believed to be similar contexts might not work in this specific location. When the realization began to set in that some of the central components of a traditional, emergent literacy approach (such as shared reading with Big Books) were not going to be accepted by some of the teaching staff (see Yaden & Tam, 2000, for a full description), we were confronted with some difficult choices: (a) We could appeal to the administration and site coordinator to encourage the staff to accept what we wanted to implement; (b) we could forge ahead with our original intervention plans and hope that the teachers and aides would eventually embrace them; or (c) we could invest time in the classroom, watching, listening, participating, and asking questions before attempting to introduce anything dramatically different than what was already taking place.

Deciding on this latter course, we took a much more active role in the classroom, assisting the teachers with their lessons and helping with support tasks such as serving meals and snacks, cleaning up play areas, supervising on the playground, accompanying classes on field trips, and in some cases, covering a class if a teacher was absent. We slowly began to be accepted as partners working with the teaching staff rather than as outside "experts" who only wanted to change practices without really attempting to understand them or the nature of the environment.

Appreciating existing practices. Developing a more collaborative working relationship with the teachers also grew out of numerous formal and informal conversations within and outside of the classroom. As we logged more time in classes interacting with the children and helping out in various classroom routines, teachers felt more comfortable sharing information about themselves, the students, and their beliefs about what was important to teach them at this age. Not surprisingly, as relationships with the teaching staff improved, the teaching staff in turn showed more receptivity to learning about research related to emergent literacy during in-service meetings and classroom demonstrations of instructional techniques. Gradually over time, teachers became more receptive to the researchers' informal feedback on their own lessons, just as the researchers profited from their observations of researcher-modeled activities. Even though, in some cases, teachers continued

to maintain earlier teaching styles and methods, as a group they began to appreciate how many other new ways of teaching they could incorporate into their current practices. In a very real sense, we came to feel that the quality of our data was directly proportional to the quality of the relationships we had developed with the children and teaching staff, as well as the parents.

Collaborative relationships are catalytic. Building trust over time between the research team and teaching staff not only enhanced the planned emergent literacy interventions in the classroom, but also increased the scope of the data collection as teachers became partners in collecting artifacts, sharing their own observations of students' literacy behaviors, and creating new opportunities for the students to engage in literacy interactions. Further, as the teachers became more confident in their own abilities to recognize and foster emergent literacy behaviors, they began to feel membership in the actual research community to which they themselves were contributing. In fact, two of the lead teachers in the project participated in a symposium at the National Reading Conference (Madrigal, Tam, Estrada, Barajas, & Yaden, 2000) where each had an opportunity to present their own views of the intervention program and the research being generated from it. Subsequently, as teachers cocreated teaching strategies, participated in theoretical discussions, and judged the success of the intervention's elements within their daily teaching routines, they became, as Wells and Chang-Wells (1992) have written, change agents in fostering not only children's literacy achievement, but in improving the instructional networking among the staff and creating an intellectual *esprit de corps* in the center, which became obvious even to the agency's administration (see Yaden, Tam, et al., 2000).

Conclusion

Despite the dismal history of efforts in the United States to educate Latinos and some grim prognostications for the future (Apple, 2000, cited in Ovando, 2001), several sources are available now that outline a substantial research base for designing curriculum and school communities in which Hispanic students have achieved considerable academic success (Barrera & Jiminez, 2001; Reyes, Scribner, & Scribner, 1999). Similar to the children in the East Los Angeles preschool described in this study, who were adept at understanding print concepts in their heritage language even though they came from home environments where parents were under both psychological and economic duress as well as time and transportation constraints, these programs (see Reyes et al., 1999, for extensive descriptions) extend the network of learning resources far beyond the classroom by encouraging collaborative governance between school and home, creating culturally responsive pedagogy, fostering clear communication among teachers and parents, and most important, implementing "advocacy-oriented assessment," which takes into consideration linguistic and cultural diversity (Ovando, 2001).

Given the findings reported recently by Reese, Garnier, Galimore, and Goldenberg (2000) that have shown in a path-analysis model that Spanish literacy in kindergarten was one of the two most powerful predictors of English reading achievement in seventh grade, it seems more than prudent to believe that strong bilingual programs from the very beginning are certainly a step in the right direction toward developing the literate capabilities needed for meeting the challenges of an increasingly complex, technological society. However, as Mitchell (2001) has recently written in a review of the

édited volume *The Politics of Multiculturalism and Bilingual Education* by Carlos Ovando and Peter McLaren (1999), literacy is only one part of the equation that also includes "a passionate defense of human rights, including language rights and the right to live in a society that is anti-racist, anti-sexist, and anti-homophobic" (p. 36). Unfortunately, history has only too often born out the fact that people are able to become literate far sooner than they can change their attitudes. Nonetheless, we as educators, in particular, must always remain hopeful that democracy will eventually fulfill its promise to all students who go through our schools.

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CHAPTER 3

Incorporating Informational Text in the Primary Grades

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THE IMPORTANCE of text format or genre is the centerpiece of this chapter. Duke and her coauthors argue for more attention to informational text in the primary grades. This focus on format and genre picks up the issues related to format raised by Bauer in chapter 2.

This chapter provides a solid review of the research literature related to the use of informational text in grades K through 2. The authors document the scarcity of informational text in primary grade classrooms, argue that the research does not justify the scarcity of informational text in primary grade classrooms, and pose that there are a number of research-supported arguments for greater attention to informational text in primary grade classrooms. The authors also provide some recommendations that will help teachers and administrators incorporate informational text in primary grade classrooms.

In this chapter, we argue that "comprehensive reading instruction across the grade levels" requires providing students with opportunities to read to learn, as well as learn to read, from the earliest days of schooling. The traditional separation of learning to read in grades pre-K–3 and reading to learn in grades 4 and up, may aptly *describe* what happens to children in U.S. schooling, but it does not *justify* it. Extant research does not support this separation, and on the contrary, there are a number of arguments against it.

Our discussion in the chapter centers around informational texts. Although it is certainly possible to read to learn texts that are not informational (for example, one can read to learn about fairy tales by reading fairy tales), informational texts are a primary text for reading to learn. It is difficult to imagine a read-to-learn classroom (or for that matter, we argue, a comprehensive learn-to-read classroom) that does not include informational text.

The chapter is organized around three key points:

- Informational text is scarce in primary grade classrooms.

- Available research does not justify the scarcity of informational text in primary grade classrooms.
- On the contrary, there are a number of arguments for greater attention to informational text in primary grade classrooms, although more research is certainly needed.

We will discuss research relevant to each of these points, and conclude with suggestions for instructional leaders in this area.

Informational Text is Scarce in Primary Grade Classrooms

Data from several different sources converge on the point that informational text is scarce in primary grade classrooms. One such source of data is analyses of the text genres represented in basal reading series. Proportions we found reported in studies within the last two decades ranged from a high of 33.8% factual articles[1] in eight basal reading series for grade 2 (Schmidt, Caul, Byers, & Buchman, 1984) to a low of 12% nonfiction in five basal reading series for grade 1 (Hoffman et al., 1994). In the most recent analysis of which we are aware, Moss and Newton (1998) examined six grade 2 basal reading series (copyright 1995 to 1997). They found a mean of 16% of selections that could be classified as informational literature.

One study (Flood & Lapp, 1986) examined the presence of expository text in three standardized reading tests as well as in the tests and materials from basal reading programs (grades K–6). They found that 38% of the selections in the standardized reading tests were expository (not reported by grade level), as compared to 16% of the selections in the basal readers and 38% of the selections in basal tests. The authors note the considerable discontinuity between the genres included in the basal readers themselves and genres included in the tests children will take.

Another source of data regarding the scarcity of informational text in the primary grades is surveys about the presence or absence of informational text in primary grade classrooms. In a recent survey of 126 primary grade teachers, Yopp and Yopp (2000) found that only 14% of materials primary grade teachers reported reading aloud on a given day were informational. A survey of 83 primary grade teachers conducted by Pressley, Rankin, and Yokoi (1996) indicated that only 6% of material read throughout the school day (not only in read-aloud) was expository. Notably, the latter sample was particularly of primary grade teachers nominated by language arts supervisors as the most effective in their jurisdiction. It is possible that such teachers use more or less expository text than a more typical group of primary grade teachers.

Direct classroom observation also has been used as a source of data about the amount of informational text experience offered to children in early schooling. Kamberelis (1998) observed all assigned and self-selected reading and writing in three classrooms, one in each grade (K–2), for a four-month period. He found that science reports and books were read by the children far less often than stories, and these were also far less often the genre of assigned classroom writing. In raw terms, fewer than 20 science reports and books were used in language arts instruction in each classroom; fewer than 10 science reports and books were assigned for writing. Duke (2000) conducted an observational study

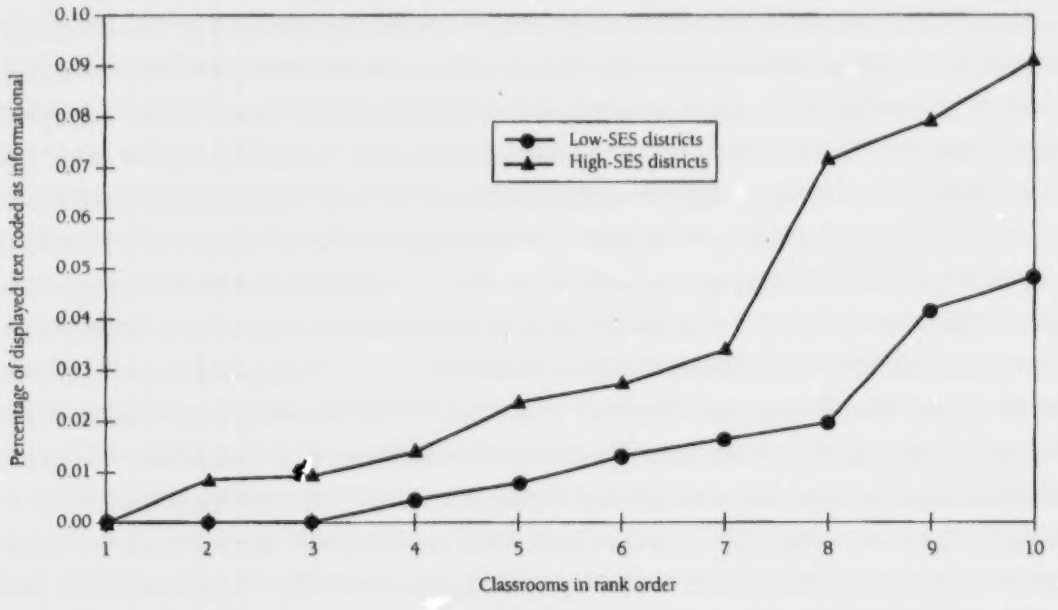
1. Here as throughout the chapter, we use the term the author used, as the author may have been referring to a somewhat different category of text types.

of 20 first grade classrooms, in both low- and high-socioeconomic-status (SES) school districts. The study revealed a scarcity of informational text not only in classroom written language activities, but also in classroom libraries and on classroom walls and other surfaces. Informational text was particularly scarce in classrooms in low-SES school districts studied. (See Figures 1, 2, and 3.)

Notably, evidence suggests that informational text has not always been so scarce in primary grade classrooms. On the contrary, analyses of reading materials available to young children throughout the history of U.S. literacy instruction indicate that at some points in time informational text has enjoyed some prominence. The first such period occurred at and around the birth of the nation in 1776. Until this time, readers in the United States contained primarily religious selections. After this time, readers included many selections intended to emphasize national pride, unification, and citizenship. Some informational selections were included for the purpose of instructing children about their environment, affairs of the state, and the workings of the new government (Smith, 1986).

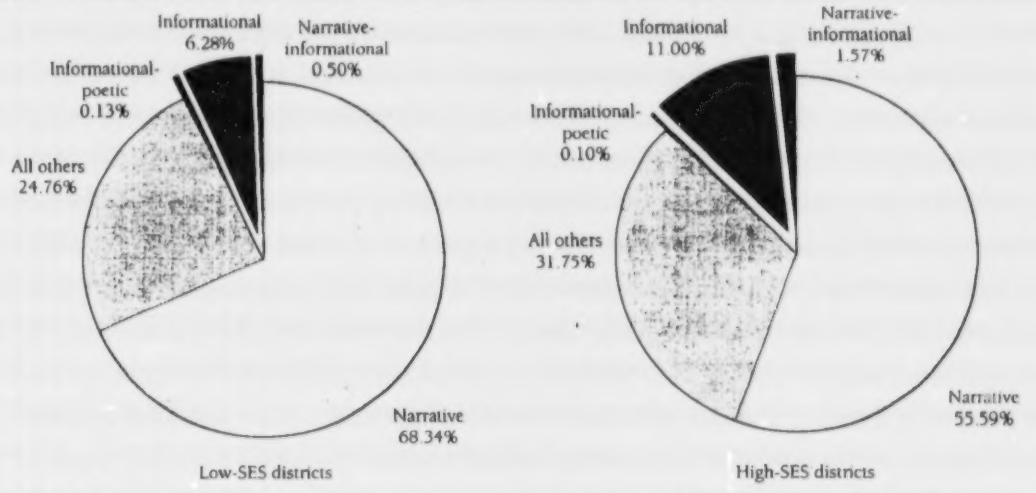
With the rise of industrialism and the perceived link between education and worker productivity (*Fifth Annual Report*, 1842), instructional materials included further attention to informational text. By 1870, McGuffey readers

FIGURE 1
Percentage of Displayed Texts Coded as Informational, Calculated at the Classroom Level, by SES, $t(14) = 1.80$, $p < .10$



Duke, N.K. (2000). 3.6 minutes per day: The scarcity of informational texts in first grade. *Reading Research Quarterly*, 35, 212. Reprinted with permission.

FIGURE 2
Proportion of Informational Texts in Classroom Libraries on Visit 1, Calculated at the Classroom Level, by SES, $t(17) = 2.22$, two-tailed $p < .05$



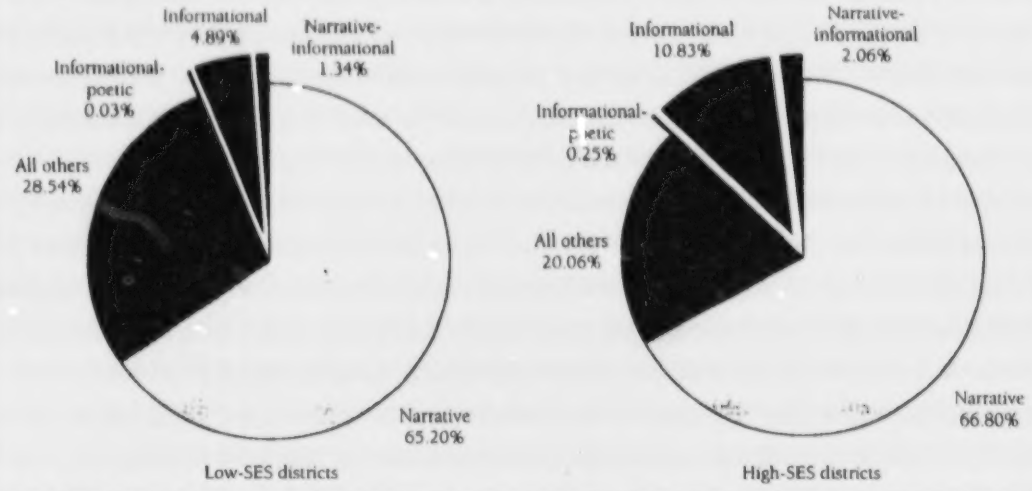
Duke, N.K. (2000). 3.6 minutes per day: The scarcity of informational texts in first grade. *Reading Research Quarterly*, 35, 214. Reprinted with permission.

offered many examples of childhood stories as well as nature-based text and histories (Venezky, 1982). An examination of a mid-century reader, Wilson's School and Family series, shows a heavy emphasis on informational work (Smith, 1986). Moralistic, character-building stories were also prevalent, but attention to scientific study in particular could not be ignored.

By the end of the 19th century, however, the tide turned away from inclusion of informational texts in instructional materials in reading. As part of a set of reforms intended to prompt a return to classicism, Charles Eliot, then President of Harvard University, called for the elimination of readers in favor of "real literature." Eliot argued that children should be exposed to quality materials rather than watered down offerings in readers. More than any other influence, this shifted early reading materials toward narrative literature and away from expository text. The desire to appeal to the child's imagination became a driving force behind textbook publishing (Venezky, 1982). By the 1920s, narrative, particularly realistic narrative, held absolute dominance in materials for reading instruction. Smith's (1986) analysis of 10 popular primers published in the 1920s shows that over 80% of pages were devoted to realistic fictional narrative; no pages were devoted to informational text.

Informational text never regained its foothold in emergent reading instruction in the 20th century, although it did enjoy fleeting periods of increased interest during the century. The Activity Movement of the 1930s led to significant attention to factual materials in some schools (Smith, 1986); after the first World War there was a brief emphasis on content reading throughout schooling (Venezky, 1982); and between 1950 and 1962 *The Developmental*

FIGURE 3
Proportion of Informational Texts Newly Available in Classroom Libraries on Visits 2–4, Calculated at the Classroom Level, by SES, $t(17) = 2.96$, two-tailed $p < .01$



Duke, N.K. (2000). 3.6 minutes per day: The scarcity of informational texts in first grade. *Reading Research Quarterly*, 35, 215. Reprinted with permission.

Reading Series published by Bond and Fay broke from its peers in including attention to a wide variety of genres (Venezky, 1982). But beyond limited exceptions such as these, informational text has remained rare in materials used for reading instruction.

Available Research Does Not Justify the Scarcity of Informational Text in Primary Grade Classrooms

There are at least three beliefs that seem to underlie inattention to informational text in primary grade classrooms—that young children cannot handle informational text; that young children do not like informational text; and that young children should first learn to read and then (around fourth grade) read to learn. In this section, we demonstrate that none of these beliefs is supported by available research in this area.

Unsupported Belief 1: Young Children Cannot Handle Informational Text

The first unsupported belief is that young children cannot handle informational text, that narrative genres are the primary, if not the only, means by which young children can understand and communicate in the world around them. This view has certainly been held by a number of researchers and theorists (e.g., Britton, Burgess, Martin, McLeod, & Rosen, 1975; Egan, 1986, 1993; Moffett, 1968; Sawyer & Watson, 1987). The extent to which it is held by class-

room teachers, publishers, or other groups has not been well documented, though it can perhaps be inferred by the textual choices made by these groups.

We could locate no research to support the assertion that young children are unable to handle informational text; nor could we find evidence in support of the primacy of narrative genres for young children. However, we located several studies that provide evidence that young children *can* learn from and about informational text if given opportunities to interact with these forms. In a landmark study in this area, Pappas (1991a, 1991b, 1993) asked kindergarten-age children on three occasions to pretend to read informational books and storybooks that had been read to them immediately before. For both the informational books and the storybooks, children's pretend readings showed increasing similarity to the books read to them in terms of a number of language features. This suggested that the children were able to learn about informational book language when exposed to informational texts.

In a related study, Duke and Kays (1998) asked kindergarten-age children to pretend to read an unfamiliar informational book before and after a three-month period of exposure to other informational books through read-aloud. Children's pretend readings on the second occasions reflected greater knowledge of several important features of informational text, such as use of timeless present tense verb constructions and generic noun structures (*Firefighters fight fires* versus *The firefighter is fighting a fire*). Again, these results suggest that young children can learn the language of informational text and reflect that knowledge in a pretend reading context.

Some data from the Duke and Kays (1998) study, as well as a study by Moss (1997), suggest that young children can learn content as well as language from informational texts. In the Duke and Kays (1998) study, children reflected content knowledge from informational texts in their journals. For example, after hearing the book *Potato* (Watts, 1988) read aloud, one child drew a detailed picture of a potato plant sprouting and explained the process in some depth. After hearing the book *Earthworm* (Soutter-Perrot, 1993), another child drew a picture of earthworms, depicting the segmented structure of their bodies. Characteristics of all-terrain vehicles, facts about spiders and their prey, and different types of ocean animals were some of the other examples of the content found in children's journals following informational book read-alouds. In another study, Moss (1997) examined first-grade children's retellings of an informational text (Selsam, 1973) read to them. Eighteen of 20 first graders she studied produced retellings scoring 3 or higher (out of 5) on a modified version of the Richness of Retelling Scale (Irwin & Mitchell, 1983). Again young children appeared to learn content from informational texts.

Newkirk's (1987, 1989) work attests to young children's ability to write informational texts. He documented that young children can produce emergent as well as more fully formed informational texts in both home and school contexts, and often times do so spontaneously. For example, a first grader wrote the following:

> This is plutowe. It is the frthest planit away fam the sun. They thought it was nata [neptune's] mon but it wasn.
>
> This is natoon. It is the sakint fwst [second farthest] planet away from the sun.
>
> This is satrne it has 10 mos [moons] and it has most rens [rings] in the solarsistm. (1987, p. 133)

Graves (1982) reports a similar finding in a study of first-grade children's writing. However, at least one other study of first-grade children's writing (Chapman, 1994, 1995) found no examples of spontaneous informational writing in the context of writers workshop. Chapman argues that this can be explained by characteristics of the particular classroom she studied, which focused heavily on personal and imaginative writing, rather than by any inability on children's part to produce informational texts.

Work of Kamberelis and his colleagues (Kamberelis, 1998, 1999; Kamberelis & Bovino, 1999) also documents relationships between children's classroom contexts and the extent and quality of their informational writing. He found that children "write what they read"—that there is a strong relationship between the types of text to which children were exposed at home and at school and their genre knowledge. Children in his study were exposed to a great deal more narrative discourse and metadiscourse than informational or poetic discourses and indeed, Kamberelis contends, their ability to write informational (and poetic) text was not as developed as their ability to write narrative forms. Although, notably, some kindergarten and most first-grade children were nonetheless able to write texts with features characteristic of informational text. Similarly, a study of four first graders' writing in Family Message Journals indicates that they were able to write informational text, as well as other nonnarrative genres, around science topics (Wollman-Bonilla, 2000).

Korkeamaki, Tiainen, and Dreher (1998) examined not only children's ability to write informational text but also their ability to conduct research with that text—that is, to use informational text to find out about something and then represent their findings in writing. The second graders studied were taught strategies for using informational text in research, and were given authentic purposes for applying these strategies to research and write their own informational texts. In this context, all but one of the seven focus students studied was able to use the strategies to research and then write informational text.

Studies examining children's discussions around informational text also suggest that they are capable of interacting successfully with such texts. Hicks (1995) documented ways in which children in first grade participated in sophisticated informational text discussions in the context of a classroom that included many texts in this genre. Oyler and Barry (1996) showed how students in a first-grade classroom initiated intertextual connections among informational books when given the opportunity to do so. Donovan (1996) examined first-grade children's ability to talk metalinguistically about informational texts (as well as narratives). She found that these children, who had been in a classroom that included regular exposure to and instruction in both informational and narrative forms, held significant metalinguistic knowledge about informational text—knowledge comparable to that which they held with regard to narrative text. In a particularly compelling case, Maduram (2000) documented remarkably complex responses to informational texts by her daughter beginning at age 3.

Another source of data regarding young children's ability to interact with informational text comes from teachers' own reports. Several teachers have published accounts of using informational text in their primary grade classrooms (e.g., Dalton & Mallett, 1995; Duthie, 1994, 1996; Fisher, 1994; Guillaume, 1998; Kamil & Lane, 1997a, 1997b; Read, 2001; Smith, 1992). Although these accounts differ

substantially in their scope and focus, all indicate that students were successful with, and indeed benefited from, inclusion of informational text in the classroom.

Unsupported Belief 2: Young Children Do Not Like Informational Text or At Least Prefer Other Forms of Text

A second unsupported belief that may underlie inattention to informational text in the primary grades is that, whether or not they can handle informational texts, young children do not like them, or at least prefer other genres. One piece of evidence suggesting that this belief exists was provided in a study by Kletzien and Szabo (1998). As part of this study, the researchers asked six teachers in grades 1 through 3 to predict which text their students would prefer to read among forced choices clearly reflective of informational or narrative genres, such as "All About Soccer" (informational) or "Chris Makes the Team" (narrative). The teachers in the study predicted that their students would prefer the narrative titles much of the time, yet in actuality the students preferred the informational titles at least half of the time (see later discussion). Just how widespread this belief is, however, is not well established in the existing research literature.

Available evidence does not support the notion that young children do not like informational text or even that they prefer other text forms. In most cases, this is because available research simply is not relevant to the question. For example, many of the studies on reading interests and preferences have not included young (pre-K–2) children, and many have investigated preferences for particular topics, rather than genres (Monson & Sebesta, 1991). (Genre preferences cannot be easily inferred from topic preferences—books about animals, for example, can be narrative or informational in form.)

Of studies that have investigated genre preferences among pre-K–2 children, results are mixed. Robinson, Larsen, Haupt, and Mohlman (1997) found that kindergarten and prekindergarten children chose modern and traditional fantasy narrative more often than informational text when given the option of several different genres of text. But Kletzien and Szabo (1998) found that first-grade through third-grade children preferred informational books at least as often as narratives, with boys generally choosing informational books more often than girls. The variation in these and other studies of reading preferences may be explained by a host of factors, including differences in methodologies used, age of subjects, consideration or lack of consideration of gender effects, and subjects' familiarity or lack of familiarity with the texts assessed (see Kletzien, 1999, for a review).

A study by Horowitz and Freeman (1995) suggests that the ways in which texts are used in classrooms studied may have an impact on children's attitudes toward them. In their study, a second-grade class in which discussion followed a read-aloud preferred an informational science book to a narrative science book; in a second-grade class with no discussion following the read-aloud, the narrative science book was preferred. As discussed in the previous section, research on children's writing also suggests that classroom context affects genre preferences.

As the reader might have inferred, an equal or greater preference for informational texts is consistently reported among the single-case and single-classroom accounts of children's interactions with informational text reviewed in this chapter (e.g., Caswell & Duke, 1998; Kamil & Lane, 1997a, 1997b; Pappas, 1991a, 1991b,

1993). However, this could reflect a selection bias in that the studies reviewed all focused at least in part on informational text. It is possible that a review of single-case and single-classroom accounts of children's interactions with narrative text would show different preferences. We can be reasonably sure that there are at least some children who greatly prefer informational texts, some who greatly prefer narrative genres, and many who do not have clear genre preferences. Indeed, of just 12 8-year-old children studied by Cooper (1995), three said they chose to read nonfiction almost exclusively, five said they read mainly fiction, and the remaining four said they have no preference. Neither the belief that young children universally prefer narrative texts, nor that they universally prefer informational forms, is supported by extant research literature.

Unsupported Belief 3: Young Children Should First Learn to Read and Then (Around Fourth Grade) Read to Learn

The two previously unsupported beliefs discussed may feed into a third unsupported belief—that children must learn to read before they can read to learn. To our knowledge, the popular articulation of this belief derives from Jeanne Chall's (1983) classic work *Stages of Reading Development*. However, the intent in Chall's work was more to *describe* the stages children go through in reading development than to argue that these are the stages children *should* go through in reading development. There may be an empirical basis for describing stages of reading development as such—as discussed earlier in this chapter at the time of Chall's writing, as now, informational text was scarce among beginning reading materials—but there is no empirical basis for saying that they therefore should be such. That is, there are no studies demonstrating that providing students with opportunities to read to learn prior to grade 4 negatively affects their reading development, or that waiting to do so until grade 4 impacts it positively.

Just as there is no research supporting a learn-to-read then read-to-learn sequence, there is little research supporting an alternative model. That is, we have little research demonstrating that providing students with opportunities to read to learn prior to grade 4 positively affects their reading development. There is one study (Kamil and Lane, 1997a, 1997b) of three first-grade and then one continuing-to-second grade class (all taught by the same teacher) for which roughly half of literacy instruction was conducted using informational text. The authors concluded that these students made "normal or above average progress" and that "it is not only possible but desirable to teach students at the first-grade level about information text genres, features, and uses." Although this does provide evidence relevant to Unsupported Belief #1 (that is, it suggests that it is at least possible for young children to develop as readers in the context of both informational and other genres of text), it does not tell us whether these children, with this teacher, would have had greater or lesser reading achievement without the informational text, or how generalizable the findings in this case study would be to other classes and settings. We are currently conducting a large-scale experimental study of the impact of diversifying genres children read and write in grades 1 and 2 to include more informational text, but results of the study are not yet available. Thus, at the time of this writing, we can only make educated guesses about the long-term impact of providing children in the primary grades with opportunities to read to learn.

We will discuss the basis of some of those guesses in the following section.

There Are a Number of Arguments for Greater Attention to Informational Text in Primary Grade Classrooms

In the absence of studies assessing the long-term impact of including informational text in primary grade classrooms, scholars have drawn on evidence of other kinds to argue for such inclusion. Many of these arguments have been reviewed elsewhere (e.g., Caswell & Duke, 1998; Dreher, 2000; Duke, 2002), so we will discuss them only briefly here.

The most obvious argument for greater attention to informational text in the primary grades is that it will make children better readers and writers of informational text (e.g., Christie, 1984, 1987). Fundamental to this argument is the supposition that more and earlier exposure to informational text will result in greater abilities to read and write informational text (Duke, 2000). Studies in which children's knowledge of informational text has appeared to develop following exposure (e.g., Duke & Kays, 1998; Pappas, 1993) seem to support this supposition, as do general patterns in which children seem to read and write bettter those forms of text to which they have had ongoing exposure (e.g., Kamberelis, 1998; Purcell-Gates, 1988; Purcell-Gates, McIntyre, & Freppon, 1995). Sometimes cited along with this argument are statistics on U.S. students' relatively poor informational reading and writing abilities coupled with the relatively important role informational literacies play in U.S. society (e.g., Duke, 1999; Moss, Leone, & DiPillo, 1997).

A cluster of arguments for greater attention to informational text focuses on other knowledge and skills it might help develop, in particular content area knowledge, vocabulary, and comprehension (e.g., Dreher, 2000; Guillaume, 1998). With regard to content area knowledge, as discussed earlier in this chapter, there is some limited evidence that young children can learn about the world around them through informational texts. Certainly among older children there is a relationship between informational reading and writing abilities and content area achievement (e.g., Bernhardt, Destino, Kamil, & Rodriguez-Munoz, 1995). Specialized vocabulary is a key feature of informational text (e.g., Duke & Kays, 1998), and there is evidence even young children do learn vocabulary from text, including text read aloud (e.g., Elley, 1989). Studies showing that teachers and parents attend more to vocabulary and comprehension when interacting with children around informational texts would seem to buttress the claim that informational text has vocabulary-building potential, and also raise the possibility that general comprehension skills might be further developed through these texts (Lennox, 1995; Pellegrini, Perlmutter, Galda, & Brody, 1990; Smolkin & Donovan, 2000).

Taking the skill-building arguments one step further are those who suggest that greater attention to informational text in the primary grades may indeed support overall literacy development. The datum most often cited in support of this argument comes from results of the National Assessment of Educational Progress (NAEP). Results showed that fourth-grade children who report reading storybooks, magazines, and nonfiction had on average higher reading achievement than children who reported reading only two of these types, who in turn had higher achievement than children who reported reading

only one. The interpretation (e.g., Dreher, 1998/1999) is that reading a greater variety of texts may make one a better overall reader or writer (although note that it is not possible to establish causality on the basis of these data).

A number of mechanisms have been suggested by which informational text might buttress overall literacy development. One regards the notion discussed previously that informational text may build background knowledge, vocabulary, and comprehension skills; that could in turn support reading of all kinds. A second regards interest. It appears that at least some children have high levels of interest in informational texts or topics addressed therein. For those children, presence of informational text in classrooms may be motivating. That motivation, in turn, may encourage the child to read more or more productively (e.g., Caswell & Duke, 1998). A third possible mechanism by which informational text may support overall literacy development regards home literacies. Informational text is read widely outside of schools (Venezky, 1992). Presence of informational text in early schooling may help children make links between home and school literacies and develop a more comprehensive understanding of what counts as literacy (see Duke, 2002, for further discussion). This may be particularly important for children from homes in which narrative reading or writing is not common (e.g., Caswell & Duke, 1998).

Suggestions for Instructional Leaders

Although arguments for including informational text in primary grade classrooms and curricula have much to recommend them, there has yet to be a large-scale evaluation of the impact of actually doing this. That said, our best guess at this time is that incorporating informational text in the primary grades would not harm, and would likely be beneficial to, young learners. Thus we suggest that instructional leaders proceed, albeit provisionally, with encouraging greater attention to informational text in their schools and classrooms.

An important next question regards what particular instructional techniques or approaches to using informational text in primary grade classrooms have been shown to be effective. Again, there is considerably more research needed. However, we can make some general recommendations informed by research reviewed earlier in this paper. We suggest incorporating informational texts into the following instructional routines in primary grade classrooms:

- *Read aloud*—Studies suggest that young children learn language and content from informational texts read aloud to them (Duke & Kays, 1998; Moss, 1997; Pappas, 1991a, 1991b, 1993). A number of resources list informational texts that are appropriate and appealing for read-aloud in primary grade settings (e.g., Bamford & Kristo, 1998; Camp, 2000; Reese & Harris, 1997).
- *Independent reading*—Some studies suggest that some children prefer to read informational texts (e.g., Cooper, 1995; Kletzien & Szabo, 1998), and capitalizing on children's reading preferences may have a number of benefits (Caswell & Duke, 1998). Research by Dreher and Dromsky (2000) suggests that independent reading of informational texts can be encouraged by making a significant proportion of informational books available to children in their classroom libraries and by including these books in read-aloud. Under such circumstances, second

graders in their study ended up selecting informational texts for independent reading about half the time.

- *Writing*—Studies have shown that young children can write informational and emergent informational forms if given the opportunity. This appears to pertain to writing tasks with assigned topics (Kamberelis, 1998, 1999; Kamberelis & Bovino, 1999), as well as to journalling (Duke & Kays, 1998; Wollman-Bonilla, 2000), and writers workshop contexts (Chapman, 1994, 1995; Newkirk, 1987, 1989).
- *Research*—Research by Korkeamaki, Tiainen, and Dreher (1998) suggests that given appropriate instruction and scaffolding, second-grade children can engage in research using informational texts as a source of data and information. Cudd and Roberts (1989) and Lewis, Wray, and Rospigiliosi (1994), among others, provide classroom-tested suggestions for helping primary grade children engage in research with informational text.
- *Discussion and response*—Several studies suggest that discussion around informational text can also be included in primary grade classrooms. Children in Hicks's (1995) research engaged in discussion interweaving hands-on experiences and informational texts on a science topic (for further discussion of the interplay of hands-on experiences and texts in science, see Palincsar & Magnusson, 2000). Children in the Oyler and Barry (1996) study made connections and comparisons between different informational texts. Children in Donovan's (1996) research engaged in explicit talk about informational texts and how they differ from storybooks.

Although more work is needed, there are resources currently available to provide further guidance about incorporating informational texts in primary grade classrooms. In addition to the references cited in the previous paragraphs, there are published accounts by teachers who have used informational text in their primary grade classrooms (Dalton & Mallett, 1995; Duthie, 1994, 1996; Fisher, 1994; Guillaume, 1998; Kamil & Lane, 1997a, 1997b; Read, 2001; Smith, 1992) as well as books focusing on a broader range of different genres (e.g., Derewianka, 1990; Green, 1992; Jan, 1991; Littlefair, 1991). Whatever your resources, a commitment to providing primary grade students with the opportunity to read to learn, as well as learn to read, constitutes an important step toward comprehensive reading instruction across the grade levels.

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CHAPTER 4

Linking Reading Assessment and Instruction in Elementary Grades

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THIS CHAPTER addresses the question, How can we use the unprecedented national resolve and commitment of resources to maximize every child's literacy development? Paris focuses on what teachers can do on a daily basis with their students. He argues that the most important action teachers can take is to blend their diagnostic assessments of children's skills with appropriate instruction. This chapter is unique in the volume for arguing against "comprehensive" reading instruction. Paris argues that the labels "comprehensive" and "balanced" are political rhetorical moves to build consensus, but they actually complicate teachers' classrooms because time is limited and teachers must always be selective and practical in their daily assessment and instructional decisions. He provides many suggestions for primary and intermediate grade teachers and makes specific suggestions for integrating assessment and instruction. This chapter suggests a conception of reading development and instruction that focuses on children in their classroom environments rather that on external lists, sequences, and definitions of comprehensive reading instruction.

The willpower in the United States to improve children's literacy has never been stronger than at the dawn of the 21st century. Federal policies, state funding, and teacher commitment have been rededicated to support early instruction, assessment, and remedial support for children's literacy so that all children are reading at grade level by third grade. New initiatives for preschool and early childhood education emphasize shared literacy experiences and academic preparation before formal schooling begins. Teacher education programs and family literacy programs have also been reinvigorated, and it is clear that no teacher or parent wants to leave any child behind on his or her journey to become literate. Literacy researchers face the challenge of proposing solutions and programs to enhance young children's reading. How can we use the unprecedented national resolve and commitment of resources to maximize every child's literacy development?

My answer to this question is framed in terms of what teachers can do on a daily basis with their students—namely, blend their diagnostic assessments of children's skills with

delivery of appropriate instruction. At the outset, let me say that my aim is to emphasize more than balance and comprehensiveness. The term *balance* has become a popular slogan for including both decoding and comprehension features in instruction, yet it has been extended to include a call for balancing a huge number of factors. The term is used casually to signal the need for balancing factors such as isolated skills and genuine reading, decontextualized language skills and real literature, teacher-directed and student-directed opportunities for learning, and guided reading and independent reading. Almost any polarized instructional topic can be added here because advocates of various approaches have tried to argue for the importance of their positions in the balancing act. The result has been a hodge-podge of instruction that is so inclusive that teachers are being asked to do more things than they can accommodate.

The same risk exists for the term *comprehensive* instruction because teachers again are being asked to do everything for all children. Balance and comprehensive may be terms that were originally intended to avoid polarized arguments about which single type of instruction is best, but they have become rhetorical compromises more than instructional prescriptions. Calls for balanced or comprehensive instruction in the classroom are being used to argue for including all types of instruction rather than excluding anything. This is where the rhetoric might be a political palliative more than a prescription for teachers. The arguments are similar for balanced and comprehensive assessment. Teachers cannot balance all types of assessment nor administer comprehensive assessments of all skills to all children. Today more than ever, teachers are overwhelmed with options for assessing children's reading, yet they have little time or training for most of them (Paris, Paris, & Carpenter, 2002).

Selective, Practical, and Conceptual Guides for Alignment

Asking teachers to provide comprehensive instruction and assessment, providing new rounds of professional development, and then blaming teachers for the lack of increases in high-stakes test scores is a cycle of frustration that we should learn to avoid (cf. Hoffman, Assaf, & Paris, 2001; Paris & Urdan, 2000). The solution to the over-inclusiveness suggested by the terms "balance" and "comprehensiveness" may lie in approaches that allow teachers to be *selective* and *practical* in the ways they align instruction and assessment. Teachers need to be selective about what kinds of assessments are given to which children and how often they are given. Instruction should also be selective and it should follow directly from the results of diagnostic assessment. This is the key to alignment between assessment and instruction—between what the child needs to learn and what the teacher needs to provide. The selectivity of assessment should be based on the developmental progress of individual children. After all, this is what makes assessment child-centered and instruction diagnostically based (Paris, 1998, 2001). It should be clear that the key to balanced approaches is not "a little of everything" at the classroom level, but rather, teachers must choose assessments and instruction according to the needs of each individual child.

Teachers need to identify the upper bounds of children's knowledge and skills at various times during the year. By upper bounds, I mean the child's top achievement, such as the highest

level of text that can be read fluently or the most complex vocabulary words that a child can read, write, and explain. This will be at the edge of children's independent abilities, or in Vygotsky's terms, the lower bound of the "zone of proximal development"—that is, what they cannot quite accomplish on their own. Thus, the child's level of development guides the teacher's selective assessment. Teachers should not assess children on skills beyond their abilities because it will frustrate them, and then assessments only describe what the children cannot do. For example, administering standardized reading tests or informal reading inventories to children in kindergarten and first grade may be frustrating for many children who cannot read, and the tests may provide little new diagnostic information for teachers. Likewise, teachers should not administer assessments of skills that children have mastered already. For example, assessing children's phonemic awareness and concepts of print are unnecessary for children who can already read connected text. For advanced readers in grades 3–6, measures of oral reading fluency and reading rate may also be superfluous.

Thus, I do not advocate assessing all children on the same tests just to simplify comparisons among students. Teachers should use their judgments about selecting which assessments to give to specific children and when they should be given. This requires careful decision making by teachers and an extensive knowledge of both children's literacy development and available diagnostic assessments, but the outcome can be empowering for teachers and more useful for children. Teachers may use various criteria, some practical and some conceptual, to guide their selective use of developmentally appropriate assessments.

Consider three practical concerns that guide teachers' selection of assessments. First, teachers are guided by the uses of the data. They may report children's achievement on report cards, in parent conferences, or for school accountability data. The purpose and audience of assessment often dictate what assessments are used. Second, teachers usually assess struggling students more than others. This is a judicious use of time for teachers and a focused use of assessment for early identification of children at risk. Students who are reading and comprehending text above their grade levels need challenging learning activities, but they do not need repeated assessments of skills they have mastered. Third, teachers usually are constrained by time and resources. Individual assessments must be brief and easy to administer and score because individual reading assessments, such as oral readings, think-alouds, and retellings, require intensive time for one-on-one assessments. Group-administered assessments are more efficient uses of time, but teachers lose the close observation and diagnoses of an individual child's performance. Group-administered assessments must be reliable and easy to score, so teachers often use commercial tests, but these cost money and the tests are often not aligned well with classroom instruction. Thus, teachers are selective about the assessments they use in classrooms because they tailor the assessments to purposes, audiences, time, and available resources.

There are also various conceptual guides that teachers use to choose assessments. A fourth criteria might be the district or state standards or externally mandated assessments. For example, the New Standards Primary Literacy Committee (1999) identified three essential components of reading for grades K–3 (print-sound code, getting the meaning, and reading habits) and three essential components of

writing for grades K–3 (habits and processes, writing purposes and resulting genres, and language use and conventions). There are many complex processes within these components, but the six components help teachers choose assessments that are aligned with their instruction. Fifth, theories and research on literacy may provide conceptual guidance for teachers about what to teach and what to test. For example, Au, Carroll, and Scheu (2001) identified six fundamental aspects of literacy: ownership of literacy, reading comprehension, language and vocabulary knowledge, word reading and spelling strategies, writing process, and voluntary reading. Each of these can be the target of classroom assessments.

Mandated procedures are another category of guides for teachers' assessments. These might include state or local requirements for assessment, but it is important to note that these proscribed assessments can and should be practical and conceptual, also. Therefore, a sixth type of guideline for teachers' selective classroom assessments may be provided by the curriculum and accompanying materials, whether selected by teachers or given to them. For example, basal readers typically include a wide range of assessments including unit tests, projects, portfolios, journals, and other forms of curriculum-based assessment. Seventh, high-stakes assessments, such as state-mandated achievement tests, influence teachers' selections of other assessments throughout the year, because teachers want to prepare their students for the specific high-stakes test. Teachers may have little control over these tests, but they may choose how to align their instruction to the tests. (Clearly the issues are more complex than "alignment" suggests because some teachers may provide too much test preparation and not enough thought-provoking instruction.) Standards, curricula, and high-stakes tests all provide guidelines for teachers about what skills and knowledge are important to teach. Thus, they provide useful guidelines for local alignment of instruction and assessment that are selective, practical, and conceptual.

Linking Assessment and Instruction for Nonreaders

Some people, including parents, may consider assessment of children who cannot read to be premature or inappropriate. Why should preschoolers and kindergarten children be tested on literacy tasks? The answer is simply to provide teachers with accurate information about children's previous literacy experiences and the development of relevant skills so that they can provide appropriate learning opportunities. This approach emphasizes a developmental approach to literacy that begins in infancy and is influenced greatly by experiences at home. Kindergarten children arrive at the school door with years of literacy development influenced by the literacy practices of families at home. Teachers need to find out what kinds of knowledge and skills children have, especially since the differences among young children can be large, even in kindergarten. Teachers need to determine the development of basic skills that are necessary for beginning reading, such as vocabulary, comprehension, book handling skills, familiarity with structure of different genres, and phonological awareness. As they determine children's emerging proficiency with language and text, teachers can provide appropriate instructional activities.

Assessments of Enabling Skills

Let us be concrete with examples of both assessments and instructional activities suitable for

nonreaders. Most 4- to 5-year-old children can be assessed with observations and activities (or variations of them) included in Clay's (1993) battery of tasks. One of those assessment tasks is the Concepts About Print task that allows children to examine a book while answering simple questions about such things as identifying the direction of reading print, understanding word and sentence boundaries, differentiating between upper and lower cases, and recognizing punctuation marks. The task can be administered quickly to children as part of joint book experiences for screening purposes, or it can be given in bits that are accompanied by instruction on the spot. For example, if a child is confused by directionality, the teacher may ask the child to follow the teachers' finger along the text or point to words as the teacher reads. If the child is confused about punctuation marks, the teacher might search text with the child (without reading it) to identify different kinds of punctuation. This might be followed by rereading sentences with intonation to show the function of punctuation such as question marks, commas, and exclamation points. Many parents provide this kind of information during joint book experiences at home, but for those children who do not bring this knowledge to initial instructional episodes, teachers must provide both assessment and instruction on concepts about print.

The same message is true for knowledge of the alphabet, letter-sound correspondences, and phonemic awareness. If children have had few experiences identifying the sounds of letters, they are unprepared for decoding print. Assessments of letter identification, sound-symbol correspondence, and phonemic skills such as rhyming and segmenting sounds, can be done quickly by knowledgeable teachers. Of course, the assessments must be connected to instruction to be useful so teachers often combine them. That is why preschool and kindergarten teachers use songs, rhymes, chants, poems, and oral language games for both assessment and instruction. However, nonreaders need experiences with books too. For example, the first books given to children have few words and most are predictable from pictures and decodable from simple rules. This allows teachers to observe how children use pictures, context, familiar topics, and their knowledge about letter sounds to decode words. When children are uncertain about decoding, teachers may isolate letters to indicate how identifying and blending sounds can be done, or they may show how context provides clues about words. Many instructional activities, such as finger painting, tracing letters, and using manipulative letter cut-outs, allow embedded assessments as teachers watch children produce letter-sound matches. These small episodes of assessment-instruction are the core of alignment, and they reveal that teachers link diagnostic assessment and focused instruction repeatedly and quickly as children engage text.

Repeated and quick links between assessment and instruction are evident throughout the day on many kinds of emerging skills and knowledge. Children who cannot read can still be assessed and taught valuable literacy skills. It would be a mistake to think that these skills must only focus on letters and sounds or how to handle a book. Four- to six-year-old children who cannot read often have limited vocabularies and limited storybook reading experiences with adults. Teachers may assess young children's knowledge of environmental print and common words to determine their vocabularies. This information may be used to provide exposure to print versions of common words through labels and flash cards. Some teachers may choose to use dictating writing activities

to help children express rich vocabularies and see their own language in print. Assessments such as Hearing and Recording Sounds (Clay, 1993) provide a method for assessing how well children distinguish sounds in words, and they offer a good bridge from listening to reading to writing. Based on informal assessments of children's developmental (sometimes called invented) spelling, teachers can determine if children are attending to beginning, middle, and ending sounds of words and which phoneme-grapheme correspondences are most difficult for them. Then, teachers may choose to introduce specific words for dictated copying, vocabulary exercises, or spelling journals.

Assessments of nonreaders can also gauge the degree to which they approximate skilled reading and writing. For example, Sulzby (1986) designed a procedure to measure children's emergent storybook reading. Her assessment examines how children shift their attention from pictures to print in five categories of behavior. In a related manner, Whitehurst, Arnold, Epstein, and Angell (1994) assessed children's dialogic reading that indicates how children take turns reading and responding to text. Teachers may use children's abilities to tell coherent stories, perhaps in dictated stories or in author's chair activities, as an indicator of their familiarity with story structure and joint book reading. Each of these assessments provides information about young children's developing skills for reading and writing conventional text.

Assessments of Comprehension

Assessing how well children understand the stories displayed in wordless picture books can provide excellent information about children's comprehension skills before they can read text (Paris & Paris, 2001). We have developed a procedure that provides quantitative scores for children's comprehension of picture books in three steps. First, children are encouraged to look through the entire book, and the examiner scores the quality of the Picture Walk by noting if children engage the book appropriately, for example, by providing dialogue and comments as they go through the book. Second, after looking through the entire book, children are asked to retell the story, and they achieve a higher score if they recall more story elements and relations. In the third phase, the examiner assesses comprehension more directly by asking questions about specific information in the story. The research revealed that young children comprehend explicit and implicit narrative information in pictures. Their understanding can be scored reliably and performance is similar across different books. There is steady developmental improvement among children from grade K to grade 2 in all three measures, but the largest differences by age and reading skill are evident in the answers to questions. Most important, children's abilities to comprehend narrative picture books predicts their reading comprehension scores measured one to two years later with conventional standardized reading tests (Paris & Paris, 2001; van Kraayenoord & Paris, 1997). These assessments of children's understanding of wordless picture books fit easily with primary teachers' use of Big Books, joint book reading, stories created by arranging sentence strips on wall charts, acting out narrative stories, and other instructional methods that emphasize narrative elements and relations.

Similar assessments may examine how familiar children are with cultural stories and fairy tales. Retelling familiar tales such as "Little Red Riding Hood" or the "Three Pigs" may provide clues about children's familiarity with

stories and vocabulary while also providing assessments of children's knowledge of story elements, sequence, and organization. Children can be asked to create dictated stories or tell stories about pictures as informal assessments of their oral language and understanding of story coherence. Comprehension can be assessed by asking children questions after presentation of information in a variety of genres or by identifying the important parts. Listening comprehension can be assessed through retelling, answering questions, or filling in missing words in a cloze procedure. Asking children to act out stories, through puppet play or readers' theatre, provides insights about how they have understood the text. Children can also discuss information they have heard as another indication of listening comprehension.

Linking Assessment and Instruction for Beginning Readers

The line between nonreader and reader is difficult to draw because there are so many components to early reading. Recognizing environmental print and writing one's own name might be evident by 3 to 4 years of age. Retelling bedtime stories, filling in missing information from familiar tales, and talking in "book language" while turning pages are evident by 5 to 6 years of age for most children. Yet many parents would not count these accomplishments as reading. If the criterion for reading is set as the decoding of unfamiliar words and the comprehension of novel text, more sophisticated skills are required. Indeed, customary assessments of beginning reading often focus on the child's abilities to read text orally, answer questions about the text, or retell it. These procedures have become institutionalized in elementary education through procedures such as round robin reading and informal reading inventories (IRIs). There are many commercial IRIs available and teachers are trained to use them for informal diagnosis, screening, and placement. In the past decade, IRIs have been advocated by states and districts as important assessments of early reading achievement, that is, as summative as well as formative assessments. Because of their importance for linking assessment with instruction in elementary classrooms, IRIs deserve close scrutiny.

Informal Reading Inventories (IRIs)

Most IRIs include graded sets of wordlists that are used to determine the passage level that children should read aloud. Of course, there are many commercial assessments of children's sight words and not all are part of IRIs, but the graded word lists in IRIs usually provide quick measures of sight words and decoding that are connected to grade levels. Although the words are decoded without meaningful contexts, they provide useful information about children's abilities to recognize familiar words as well as to sound out words that are usually decodable and phonetically regular. Teachers can use this information to assign leveled books for independent reading, to teach phonemic awareness (e.g., onset-rime patterns), and to show children specific strategies (e.g., decoding by analogy). Teachers often combine instruction on phonics, spelling, and decoding when teaching children new vocabulary words through wordlists.

Although wordlists in IRIs were not intended for summative purposes, they can provide useful information that is correlated with vocabulary growth and reading achievement. We were able to use the data derived from children's

recognition of words by creating a single scale across grade levels of the words (Paris et al., in press). Our method can be copied easily by anyone who wants to use the data from IRIs to plot growth. The key to our scoring scheme is to give credit to children for knowing all the wordlists below the highest levels administered. For example, if there are 10 words at each grade level (preprimer, primer, first grade, second grade, and so forth), a child who identified six words correctly on the third-grade list and nine words on the second-grade list (and was not administered any of the lower levels) would get a total word score of 6+9+10+10+10 for a total of 45, because the child was given full credit for the three lowest word lists. Children and teachers can graph scores for word identification to monitor progress. The assessments can be connected to instruction easily through activities centered on word walls, decoding strategies, and phonological awareness. Thus, daily instruction on recognizing and decoding words can be linked to assessments that are both diagnostic and summative.

The central purpose of IRIs has been to allow teachers to listen to children's oral reading in order to identify their sources of difficulties and expertise. The tools for accomplishing this goal have included observation, anecdotal records, recorded readings, miscue analyses, and running records, with the last two methods the most popular format for reporting and analyzing children's oral reading. Miscue analysis (and retrospective miscue analysis) were popularized by Goodman and Burke (1972). Running records are identified with Reading Recovery and the methods described by Clay (1993). Most commercial IRIs employ one of these methods, which are similar and readily adapted by teachers according to the level of detail required. Rather than compare these methods, I want to point out a few of the strengths and weaknesses that we have found with assessments of oral reading in our experiences.

One positive feature of observing children read aloud is the insights afforded about children's reading strategies. For example, listening to children read can show what they do when they encounter an unknown word, how they sound it out, how they look back in text or appeal to pictures and context for clues. Oral reading provides information about erroneous tactics such as guessing words based on the first letter or skipping words and lines because of tracking errors. Teachers use this information to provide children with immediate and appropriate instruction as they read. A second asset of oral reading assessments is that teachers can diagnose difficulties that children have with phonemic analysis of unfamiliar words. IRIs provide clues about the specific letters and letter combinations that may be obstacles for children's decoding. A third strength of IRIs is that the results, however collected, can be shared with the children, parents, and other educators. In this manner, teachers can identify and discuss skills that require more practice or remedial attention.

However, we have identified some problems with oral reading assessments that deserve attention, too. First, the focus is often on oral reading accuracy or speed with less attention given to comprehension. Many people assume that children who read out loud quickly and accurately are also understanding what they read, but our research (Paris & Carpenter, 2001) indicates that the correlation between comprehension scores and oral reading fluency scores decrease from a modest positive correlation to nearly zero by grades 3 to 4. This may indicate two kinds of disjunctions between comprehension and oral reading: (1) Many "word callers"

are saying the words without understanding the meaning of the text, and (2) other "gap fillers" are stumbling through the oral reading task but understanding the text surprisingly well. Both patterns lead to negative correlations between comprehension and oral reading that are balanced out by the positive correlations exhibited by ordinary good and poor readers. The net result, when summed over children, is no evident correlation between comprehension and oral reading fluency after grade 3 or 4. To the extent that this is true for some children, for instance, the word callers and gap fillers, oral reading measures may have limited value as assessments for children reading at grade level past grade 3 or 4.

A second problem that we have identified with oral reading tasks is that they do not allow children to use many strategies that they are taught such as rereading, looking back and forward in text, or paraphrasing the meaning periodically. The oral presentation demands may make children anxious too, so they may worry about saying the words correctly more than understanding what they mean. Thus, silent reading assessments may be needed to balance oral reading assessments, especially for children in grades 3 and higher.

A third problem is interpreting the data derived from IRIs. Teachers need to be trained to administer IRIs uniformly as well as to interpret oral reading miscues and strategies during informal observations. Moreover, when the data are collected and recorded systematically for summative purposes, the patterns of growth may be difficult to interpret because of the differences among passages and levels. To put the problem in a practical perspective, consider the first grader who reads several passages in the fall and some different passages in the spring. Most IRIs would yield information on the percentage of words read correctly and some type of comprehension measure such as the number of questions answered correctly or level of retelling. However, how can teachers compare oral reading performance when text levels and performance vary? For example, if our first grader read a first-grade passage in the fall with 97% accuracy and good comprehension, and then in the spring read a second-grade passage with 92% accuracy with less clear comprehension, how can we evaluate the data and interpret growth? This problem is evident for any reading assessment that uses running records or miscue analyses, and it may be one of the reasons that teachers use them more for informal purposes rather than for summative measures of achievement.

There are several possible solutions to the problem (Paris, in press). First, teachers might administer the identical passages in the fall and spring (or at any two different times) so they can calculate the degree of improvement on the same measures on the same passage. If a child can read the same passages faster, more accurately, with better intonation, and with better understanding, it seems safe to say that the child's reading has improved. If the time between tests is more than a month, it also seems safe to assume that practice effects are not the reason for improvement. Second, if a child can read more complex passages at the second test with the same or higher level of fluency and comprehension than initially, then positive reading growth has occurred. The third method is to use Item Response Theory (IRT) to place all the data from different children reading different passages and text levels on the same measurement scale and to compare standard scores between test times. This procedure requires a large sample and sophisticated statistical analyses, but it is an innovative way that we devised

to interpret IRI data (Paris et al., in press). All three alternatives allow IRI data to be used to assess growth, and all three can complement the use of IRIs for informal, on-the-spot diagnoses of children's oral reading behaviors.

Paper Trails of Literacy Accomplishments

Although primary teachers use observations of children's reading and writing as their main source of evidence to guide instructional decisions, there are many types of literacy assessments that leave more visible indicators of growth (Johnston, 1992). Sometimes teachers use checklists, notes, and rubrics on work samples to assess daily work. Many assess children's performance on the literacy activities they complete in school. Children's writing folders, for example, may include samples of children's work that can be assessed for handwriting, spelling, and phonemic awareness as well as grammar, content, and understanding. Book logs can include titles of books that children have read in the past month, as well as comments or evaluations by children. Such logs provide evidence of the variety of genre and difficulty that children have read, too. Spelling books, work folders, and journals can reveal developmental progress over time. These may be collected in portfolios, notebooks, or file folders, but whatever the form of organization, they provide visible evidence of classroom activities and developmental progress.

One problem with portfolios concerns the collection of performance indicators. Teachers need to be selective about what is included in the portfolio and how long things stay there. Work samples that reveal important learning and achievement are good candidates for inclusion, especially if they can be used for other assessment practices such as parent conferences or report cards. A second problem is how portfolios are used. I believe that portfolios should encourage children to be self-regulated learners who monitor and take pride in their own accomplishments. Children should be encouraged to take ownership of their portfolios, to review and evaluate their own work, to identify skills that require improvement, and to share their work with others (Paris & Ayres, 1994). One way to facilitate self-evaluation is through teacher-child conferences about the child's work and what it indicates. We have found that structured interviews about work samples are enjoyable for children and correlated with their achievement (van Kraayenoord & Paris, 1997). Another way to help children appraise their own work and take pride in their accomplishments is by allowing children to present their own portfolio review at parent-teacher conferences (Tierney, Carter, & Desai, 1991).

Because of increasing pressures to demonstrate children's academic achievements, elementary teachers need to choose methods for assessing their students that will yield visible evidence of work samples and literacy performances, as well as test scores, that together show what children have accomplished and how their performance compares to other children. For example, teachers may choose to evaluate work samples according to rubrics, benchmarks, standards, or curriculum-embedded performance indicators that are connected to instructional decisions (e.g., Meisels, Bickel, Nicholson, Xue, & Atkins-Burnett, 2001). This kind of information reinforces teachers' observations of daily behavior and interpretations of test scores to provide more comprehensive assessments of children's achievements.

Linking Assessment and Instruction for Skilled Readers

Reading assessment for children in grades 3 through 6 becomes increasingly high stakes as they experience more tests mandated by districts and states. The assessment formats change from individually administered to group-administered tests, from oral to silent reading, and from oral responses to written or multiple-choice answers. Some high-stakes tests also have time limits, unfamiliar response formats, and external pressures to perform well, so the differences between the formats and routines of high-stakes tests and children's customary classroom instruction and assessment often grow larger as children progress through successive grades (Paris, 2000). Children notice the changes in assessment procedures. By fifth grade, they are able to distinguish differences between classroom assessment and high-stakes assessment in terms of the value and importance attached to the tests, and they report significantly more anxiety about high-stakes tests (Wong & Paris, 2000). Classroom teachers are forced to adapt reading instruction to the multiple types of assessments that children receive so they often use many practice tests that are similar in format to the high-stakes tests while simultaneously using informal assessments of daily work.

Whether reading instruction is aimed at high- or low-stakes assessments, there is much more emphasis placed on comprehension than on oral reading fluency in grades 3 through 6. Four types of classroom reading assessments are most evident among upper elementary classrooms. First, teachers ask students more types of questions about text that they read, especially when silent reading is involved. The questions usually address the following: (1) factual and explicit information, (2) inferences that can be made with the text information, (3) inferences that require information beyond the text, (4) critical and evaluative interpretations of text, (5) author's craft and style, (6) relations among different texts or books, and (7) metacognition about the strategies used by the readers or metalinguistic features of the text. Question asking and answering can be connected directly to instruction through routines such as K-W-L (Ogle, 1986) and QAR (Raphael & Pearson, 1985). The former method requires children to state or discuss what they *K*now already about the topic, what they *W*ant to learn (i.e., their reading goal), and after they finish reading, describing what they *L*earned. The QAR, or Question-Answer Relationship, is an instructional tactic that helps children recognize when a question requires information within or beyond the text and helps children understand how to search text and their own knowledge for the answers.

A second frequent method for assessing reading is with Think-Aloud procedures. Regardless of what prompts are used to elicit children's thinking about text, teachers can gain insights into children's thinking if they listen to them explain how and what they think as they read (Johnston, 1992; Pressley & Afflerbach, 1995). For example, when children talk about their reading, they may reveal their use of inappropriate strategies such as failing to preview the text, identify a reading goal, or think about the topic, before beginning to read the text. Conversely, they may describe reading strategies that provide them with clever short-cuts or thoughtful analyses of text. One method for assessing children's verbalization as they read is the Think Along Passage (TAP) described by Paris (1991). While children read aloud, teach-

ers intersperse questions that query understanding and strategy use. For example, after asking a child an inferential question, a teacher might follow up by asking, "How did you know that?" or if the child did not know the correct answer, "What could you do to find out the answer?" These questions interrogate the child's knowledge about the question-answer relationship and the child's knowledge about how and where to search text for relevant information. As children read through text, teachers can ask a variety of questions about the strategies they might use before, during, and after reading. In this fashion, children are not just talking about anything that comes to mind as they read but, instead, they are describing the strategies they actually used to figure out the answers to questions or tactics that they could use. Research on the TAPs task shows that children's abilities to describe their thinking is highly correlated with other measures of metacognitive awareness and reading comprehension (Paris & van Kraayenoord, 1998). These kinds of think-aloud procedures can be used interchangeably for assessment or instruction.

A third method that teachers use to assess reading in upper elementary grades is summarization and critical analysis. These build on oral retelling that is more common in kindergarten through second grade, but the emphasis shifts toward summarization of important information. Of course, being able to summarize text information selectively means that children have to be able to differentiate important from unimportant information as they read and study text, a skill that is not well developed even among eighth graders (Winograd, 1984). Summarization depends on identification of key elements and relationships in narrative text and main ideas in expository text. Indeed, the distinctions between the information gleaned from various genres of text is one of the central features of reading instruction in grades 3 through 6. Duke (2000) argues that the paucity of exposure to expository text in primary grades, less than four minutes per day, is a strong rationale for emphasizing instruction on different genres to children in lower grades (see also chapter 3, this volume). Summarizing key features of text, recalling information in sequence, and providing main idea statements can all be emphasized in instruction in primary grades as easily as upper elementary grades.

A fourth method that teachers use to assess reading in upper elementary grades is through various responses to text. Primary grade children may respond to text through art, play, and drama. They may reread using chorale reading or chanting. Older children often respond to reading through writing in logs and journals, writing essays about the topics, or writing short answers to text. Teachers use such written responses to assess the quality of both reading and writing. They are visible evidence of achievement and are often included in portfolios or writing folders. Sometimes children may respond to text with representations of information in semantic webs, time lines, cause-effect chains, and other forms of graphic organizers. These devices allow teachers to analyze and represent ideas in text for instructional purposes and then use the same formats in assessments of children's understanding.

Of course, responding to text often occurs in paired or group discussions. Reciprocal teaching, a paired activity, is another format that works well for both instruction and assessment because children take turns being the teacher or student while asking the other students to paraphrase, summarize, ask questions, and monitor the meaning (Palincsar & Brown, 1984). Book clubs, authors' chair, and other classroom formats for

group discussions can be used for assessment of children's reading comprehension, too. These require teachers to establish observations, rubrics, or peer- and self-evaluation systems for assessment and to connect those systems to classroom instruction. Assessing how students respond to text is complex and may depend on teachers' judgments, but this assessment can be valuable in determining students' mastery of the curriculum and engagement with text.

Conclusions

One of the most difficult tasks facing teachers today is to align curriculum, instruction, and assessment. This is made more difficult because each of these three critical components changes independently as districts and states adopt new approaches almost annually without synchronizing them. Teachers must constantly reevaluate their classroom practices to ensure that they are aligned with new materials, standards, tests, and instructional methods. Let's be candid—this is a source of frustration for teachers, whether new or experienced, who are required to adjust their teaching to external mandates and continual changes. How can teachers overcome the frustration?

One suggestion is to be selective about the ways that assessment is conducted in classrooms. When assessments are practical and useful to the stakeholders, they are easier to blend with conventional reporting methods such as conferences and report cards. Another suggestion is to use the state and district guidelines about which assessments and instructional approaches are considered important. Finally, teachers can use theories, research, and professional development to provide conceptual guidelines about how to integrate assessment and instruction. Assessment that is selective, practical, and conceptual will serve the children and parents well. Above all, the assessments should be coherent and sensible to children and parents. That is, the reasons for the assessments, the format of the assessments, the results of the assessments, and the use of the assessments must make sense to the primary stakeholders in order to enlist their motivated participation in future learning.

When we stand back from schools and consider educational assessment, we should think of it as more than test scores and report cards, more than teachers' opinions about our children, and more than work samples displayed at conferences. Assessment is not what happens at the end of teaching and learning or at the end of the unit or term. Assessment is an ongoing process, intertwined with learning; just as coaching in music or athletics involves continual appraisal and instruction, so are assessment and instruction in literacy woven into the fabric of the day's activities for children and teachers. Opportunities for assessment are opportunities for learning, and vice versa. Teachers with experience come to realize this close connection, and they eschew old notions of assessment as the test at the end of the unit. The art of teaching includes knowing how to weave these opportunities into students' daily activities and how to interpret the fleeting glimpses of literacy skills that students exhibit throughout the day. In the end, alignment of assessment, curriculum, and instruction is part of the expert teachers' craft, honed by years of experienced observation, centered on their rich knowledge of children's development, and focused on nudging each and every child a little bit further on their path of academic achievement.

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CHAPTER 5

Balanced Literacy Instruction: Addressing Issues of Equity

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IN THIS CHAPTER, Au addresses the political issues surrounding balanced or comprehensive reading instruction. Because the chapter is based on her observations in Title I schools in Hawaii and elsewhere in the United States, it offers specific guidance to Title I teachers and to classroom teachers who teach in Title I schools. Au tackles specific aspects of balance that affect equity and focuses particularly on what balance means for Title I schools, defining balance as attention to three basic areas of reading instruction: local knowledge about reading (a variety of word identification strategies that includes phonics), global knowledge (text understanding and response to literature), and affective knowledge about reading (love of reading). Au also focuses on five dimensions of balance that are particularly important to equity concerns and the literacy achievement of students of diverse backgrounds. She is quite specific about what she sees as imbalance, and she makes quite clear what can be done to correct the imbalance.

My major research interest is the school literacy learning of students of diverse cultural and linguistic backgrounds, and in pursuing this interest I have spent considerable time working with teachers in Title I schools in low-income communities in the United States. They are called Title I schools because of the funding they receive to improve students' achievement under Title I of the federal Elementary and Secondary Education Act (ESEA). In this chapter I want to place my discussion of balanced literacy instruction and equity in the context of my research and observations while working in Title I schools in Hawaii as well as in other states.

Interest in balanced literacy has grown over the past few years. I believe this interest stems from the fact that many educators are searching for the middle ground in the continuing debates about the teaching of reading. This search is especially critical in Title I schools where many students are of diverse cultural and linguistic backgrounds. The reading achievement of these students is of particular concern because, on the whole, they continue to score much lower in measures of reading achievement than their mainstream peers (Donohue, Voelkl, Campbell,

& Mazzeo, 1999). Our goal must be to close the literacy achievement gap, and balanced literacy instruction provides a framework for thinking about how this goal can be achieved.

A Philosophical Perspective

It seems logical to start with the question, "What is balanced literacy instruction?" Fitzgerald (1999) points out that balanced reading (and by extension, balanced literacy instruction) is a philosophical perspective, not a particular program, method, or set of practices. This means that balanced literacy instruction can take many different forms. To implement balanced literacy instruction, teachers must go through the process of exploring and making explicit their own beliefs about literacy. Once they have their beliefs and values clearly in mind, teachers are in a better position to make decisions about practice.

Fitzgerald identifies three characteristics that appear to cut across descriptions of balanced reading instruction. The first is a focus on giving an equal weight to key aspects of the curriculum or key aspects of instruction. For example, in the reading approach described by Baumann and Ivey (1997), an effort was made to balance literary envisionment activities (Langer, 1995) with instruction in strategies and skills. The second characteristic is a focus on how the classroom program is to be conducted. For example, Au, Carroll, and Scheu (2001) present detailed descriptions of the readers' and writers' workshops, including structures, teacher-directed activities, student-directed activities, and assessment. The third characteristic is a focus on the kinds of reading knowledge students should gain from the approach to balanced instruction being recommended. For example, in the approach of Baumann and Ivey, the emphasis on literary envisionment activities indicates that students should learn to respond to literature and comprehend text. The emphasis on strategy and skill instruction suggests that students should gain cognitive processes central to effective reading.

In a balanced reading perspective, Fitzgerald suggests students' knowledge about reading should be seen in terms of three broad categories, all of equal importance. She calls these categories local knowledge about reading, global knowledge about reading, and affective knowledge about reading (love of reading). Included in local knowledge about reading are areas such as phonological awareness, sight vocabulary, sound-symbol relationships (phonics), spelling patterns, and word meanings. Local knowledge encompasses a variety of word identification strategies besides phonics, such as strategies related to making use of sources of information such as structure or grammar and meaning or sense (Clay, 1993). Concepts about print central to emergent literacy (for example, directionality) also fall into the category of local knowledge about reading.

Global knowledge includes text understanding and response to literature, along with the strategies that support these broad processes. These include the five effective comprehension strategies identified in the review by Dole, Duffy, Roehler, and Pearson (1991): determining importance, summarizing information, drawing inferences, generating questions, and monitoring comprehension. Metacognition, or awareness of one's own thinking, in this case while reading, is also a type of global knowledge.

Affective knowledge of reading, or the love of reading, relates to positive attitudes, emotions, and feelings, and motivation or desire to read. Elsewhere I have discussed the importance of ownership of literacy, which is a form of

affective knowledge (Au, 1997). Students with ownership use literacy for purposes they set for themselves, both in and out of school. In other words, they value literacy and make it a part of their everyday lives.

Fitzgerald notes that these categories of knowledge about reading are interconnected in many ways and should not be considered separate or discrete. Teachers who take a balanced view regard all three categories as central to students' learning and development as readers.

Five Dimensions of Balance

With this background about balanced literacy instruction, we can now make connections to issues of equity. In discussing these connections, I will focus on five dimensions of balance with particular importance for the literacy achievement of students of diverse backgrounds:

- authenticity
- response to literature
- teachers' roles
- skill contextualization
- curricular control

I find that these five dimensions of balance are central to issues of equity in Title I schools at this time. I selected these dimensions from those outlined in a chapter by Pearson and Raphael (1999). If you are not familiar with their chapter, I urge you to read it, because it provides a fuller picture and a more elegant analysis of the many dimensions of balanced literacy instruction than I will give here.

Authenticity

Dimension of balance. The authenticity of literacy instruction may be judged by the extent to which it relates to the real-life concerns of students and to the actual uses of literacy in the home and community. The balance that must be struck in classrooms, according to Pearson and Raphael (1999), is between "doing school and doing life" (p. 9). The argument for authenticity stems from the inauthentic and unrealistic nature of many school tasks, which have no apparent usefulness in the real world. Instead of aiming only at success in school, lessons should aim at success in life. To make literacy instruction authentic, teachers should focus reading, writing, and talking about text on authentic tasks. These would include discussing literature with peers (e.g., McMahon & Raphael, 1997), just as adults might discuss books with one another. By contrast, when taking a doing-school approach, teachers quiz students on preset lists of comprehension questions.

On the surface, Pearson and Raphael (1999) note, it may seem difficult to argue against an emphasis on authenticity. However, the notion of authenticity cannot be taken so literally that teachers fail to take the time to teach students such useful skills as phonics, grammar, and punctuation. These formal features of language should continue to be the object of study, even though they may not always fit within the context of authentic literacy tasks.

Equity issues. The connection I see to issues of equity is that classroom instruction in many Title I schools has shifted too far to the side of doing school. In developing this point, I first want to explain why it is indeed important to teach students of diverse backgrounds to do school. Teaching students to do school can be beneficial as long as it is a means of giving them access to academic knowledge and not only a means of behavior management. Like other students, students of diverse backgrounds need to

learn to do school so they can acquire the social and academic knowledge necessary to graduate from high school, attend college, and gain access to better life opportunities. In terms of literacy, doing school may require displaying in isolation what Fitzgerald (1999) calls local knowledge of reading, such as phonics, grammar, and other skills. For example, students may be called upon to display such knowledge in isolation when participating in teacher-led lessons in some reading programs, when completing workbook pages as part of these programs, and when taking standardized tests. Proficiency in the doing school part of literacy may help students of diverse backgrounds overcome some of the barriers that typically prevent them from advancing in school. Although a higher level of education is not necessarily a strong guarantee of good jobs for individuals of diverse backgrounds (e.g., Ogbu, 1981), schooling is still the means by which many students of diverse backgrounds eventually gain better life opportunities (e.g., Haynes & Comer, 1990).

As I see it, the problem is that the emphasis in literacy instruction in many Title I schools has shifted so strongly toward doing school that it has lost contact with doing life. This is because the most widely used reading programs—adopted by schools as part of the federally funded initiative for comprehensive school reform—center on scripted lessons designed to teach skills in isolation. The emphasis is on local knowledge of reading and not on global knowledge or on affective knowledge. Teachers generally do not depart from the script to make connections between lesson content and students' lives. Furthermore, because lessons seldom incorporate authentic tasks with connections to literacy activities in the real world, students are unlikely to see the relevance of literacy to their own lives. As a result, students often come to view reading and writing as school activities that have no use in the world beyond. Students' lack of affective knowledge, which manifests itself as an absence of ownership of literacy, has devastating results. Many educators in Title I schools have had the experience, as I have, of seeing a drop in students' motivation to learn and in their willingness to cooperate with teachers, often beginning in the third grade. This disaffection with school no doubt contributes to the low rates of high school graduation seen among students of diverse backgrounds. Black students account for 20.4% of dropouts, although they represent 15.7% of the student population, while Hispanic students account for 20.2% of dropouts, although they represent 12.9% of the student population (Kaufman, Kwon, Klein, & Chapman, 2000).

Steps to achieve a balance. First, teachers can seek an understanding of why authenticity in literacy instruction may be especially important for students of diverse backgrounds. In my own research and observations, I have found that many Native Hawaiian children come to school without a background in family storybook reading. Heath (1982) found a similar pattern among the African American children she studied. These findings are significant because they suggest that many students of diverse backgrounds arrive in kindergarten not knowing that books can be a source of enjoyment and information. Students who lack a background in family storybook reading may have had other literacy experiences (Guerra, 1998; Taylor & Dorsey-Gaines, 1988), but school lessons are seldom designed to tap these experiences. Students who do not have an understanding of books and the motivation to read them will not

be in a good position to benefit from skill lessons in isolation, because they will not see the purpose behind these lessons. Lessons centered on authentic literacy tasks, such as shared reading to enjoy and comprehend a new book, help children without a background in family storybook reading to understand how books work and why someone would want to read them. Children may be better able to learn skills when they are motivated to do so because they see the larger purpose for learning skills.

Second, as implied above, teachers can seek to balance the direct instruction of skills with authentic literacy activities that help students see how literacy can be valuable in their own lives. An example of an authentic literacy activity is reading and discussing novels in Book Clubs (Raphael & McMahon, 1994) or literature circles. Students who participate in Book Clubs and share their responses with others find joy and meaning in reading (Vance, Ross, & Davis, 1997).

Third, teachers can engage students in discussions of literature that make evident the connections between the theme of the text and students' own lives. This type of discussion makes it clear that reading has to do with real life and not just school. The experience-text-relationship (ETR) approach is one way that teachers can accomplish this goal. I discovered ETR while observing reading lessons taught by teachers successful in bringing Native Hawaiian children to high levels of literacy (Au, 1979). These teachers did not simply have students read stories and quiz them with set questions. Rather, teachers thought in advance about a central theme, to be developed in discussion, that would allow them to make connections between the text and students' lives. For example, if the potential theme is learning from grandparents, the teacher begins the lesson by having the students talk about their grandparents (Au, 1992). After this discussion experience (E), the teacher has the students engage in silent reading of a chunk of the text, followed by discussion of that portion of the story. In this, the text (T) of the lesson, the teacher alternates between silent reading and discussion until the students have worked their way through the entire story. The relationship (R) of the lesson follows. At this time the teacher has the students review important points in the story and construct a theme to tie the whole story together. The teacher then asks students to draw relationships between the theme or author's message and their own lives. For example, with the theme of learning from grandparents, the teacher has the students discuss what they have learned from their grandparents and how those experiences were similar to or different from those of the characters in the story just read. This focus on comprehension, in which teachers help students to see connections to their own lives, is one factor related to the improved reading achievement of Native Hawaiian children (Tharp, 1982).

The idea is that teachers must first guide students to see the connections between literacy and their own lives. On the basis of this affective knowledge, students will be better able to recognize the importance of local knowledge of reading, such as phonics. Through this process, authentic activities that make students aware of the place of literacy in doing life provide the foundation necessary for the skill activities related to doing school.

Response to Literature

Dimension of balance. In terms of response to literature, Pearson and Raphael (1999) discuss the need for a balance between reader-driven versus text-driven understandings. On one side are

those who value the reader's own responses to literature over the conventional, canonical, or received view of the text. Rosenblatt (1978) and others have argued that in the reading of literature the greatest importance should be attached to the reader's own response to the text. This response includes the meaning or interpretation the reader gives to the text, as well as the feelings or emotions the text elicits. On the other side are those who believe that students should know the conventional meanings that expert readers and society in general have assigned to texts. The cultural knowledge represented in the official meanings of text may prove useful in situations such as tests or interviews where students must demonstrate their competence. Pearson and Raphael see the need to strike a balance between the two goals of schooling: (1) helping students to make connections to the past, which requires a knowledge of the conventional wisdom, and (2) preparing them to meet the future, which requires an emphasis on invention or students' creative and interpretive abilities.

Central to this analysis is Rosenblatt's (1978) work on reading stances. Rosenblatt pointed out that the aesthetic stance should predominate in the reading of literature. An aesthetic stance is evident during reading for the sake of what Rosenblatt called the lived through experience of reading, or what we commonly call being lost in a book. In her theory, readers shift back and forth between the aesthetic and efferent stances, which form ends of a continuum. The efferent stance is adopted when the reader reads less for the sake of enjoyment and more for the purpose of carrying away information from the text. Examples of efferent reading are studying a biology text in preparation for a final exam or perusing the want ads in search of a new job. Obviously, students need to learn to read from both the aesthetic and efferent stances. The aesthetic stance is needed for students to know the joy of reading and to become lifelong readers. The efferent stance is needed for students to read to acquire the knowledge needed to function effectively not only for school and academic purposes, but for the purposes of employment, citizenship, and family life.

Equity issues. My observations in Title I schools suggest that the balance has shifted strongly over to the side of efferent reading. A number of widely used reading programs treat text comprehension largely in terms of finding the correct answer or conventional interpretation to questions. Little attention is given to the possibility that readers may construct multiple meanings of text or that works of literature often have several themes and interpretations. Furthermore, if teachers are working from scripts, they do not often make connections between the text and students' prior knowledge (as in the ETR approach discussed above).

Although efferent reading activities can be beneficial to students for the reasons mentioned earlier, we must consider as well what students miss when they have little or no opportunity to read from an aesthetic stance or to make personal connections to text. Certainly, students miss the chance to experience the joys of reading and literature. Some of the reading programs widely used in Title I schools do not use high quality children's literature as the basis for the teaching of reading. The reliance on texts written expressly for the purpose of teaching reading gives students considerable opportunity to practice skills but less opportunity to find the magic in reading. One concern in terms of equity is that many students of diverse backgrounds are not learning what it is like to read books they enjoy and to read for the sake of reading. In Fitzgerald's (1999) terms, their

affective knowledge of reading is not being developed, and as mentioned earlier, this may lead to a drop in students' motivation to read.

Another concern for equity is that an overemphasis on reading to obtain the correct or conventional answer may lead students away from learning to invent and defend their own interpretations of text and to think in a divergent yet principled manner. The danger is that students of diverse backgrounds may have less of a chance than mainstream students to learn to think in higher level ways about text (cf. Delpit, 1991). This situation puts students of diverse backgrounds at a disadvantage in their pursuit of higher education and careers where such thinking is required.

Steps to achieve a balance. Steps should be taken to give students of diverse backgrounds ample opportunity to read from an aesthetic stance and to learn to love reading. Steps should be taken as well to ensure that they receive extensive instruction in building strategies of higher level thinking with text, including developing and justifying their own interpretations.

First, teachers should make literature central to literacy instruction and to classroom life. Research suggests that literature-based instruction can promote the reading achievement of students of diverse backgrounds (Morrow, 1992; Morrow, Pressley, Smith, & Smith, 1997). Even if the reading program adopted by the school does not center on literature, there are still steps teachers can take to bring literature into the classroom. Reading aloud is a simple but highly effective instructional approach for building affective knowledge of reading. Even older students enjoy hearing a good book. Read-alouds provide students with a common literary background, give them ideas of authors whose books they may enjoy reading, and support the development of the classroom community of readers. As part of a study of voluntary reading, I interviewed fifth graders in a rural school in Hawaii. Many students declared that their favorite author was Roald Dahl, and it was clear that they had read many of his books. I discovered that these students had all had the same third-grade teacher; her enthusiasm about Roald Dahl, conveyed through read-alouds, proved to have a contagious and lasting effect. Teachers should never underestimate their power to promote students' love of reading.

Second, teachers should give students time to read books of their own choosing during sustained silent reading (SSR), which creates the occasion for students to experience aesthetic reading. Teachers must be aware, however, that many students of diverse backgrounds do not automatically know how to select books they will enjoy reading (cf. Reyes, 1991). In the same study of voluntary reading, one of the questions was "How do you decide which book to read next?" One student I interviewed replied, "I just run in the library and grab any book!" Students benefit from strategies for finding books they will enjoy, such as seeking recommendations from a librarian, teacher, or classmate; reading the jacket of the book; or looking for books on favorite topics or by favorite authors. Another fifth grader told me that he had not become an avid reader until the fourth grade. His fourth-grade teacher insisted that everyone read during SSR. At first, he would choose a new book at random every day and just pretend to be reading. One day he decided that, if he was going to be sitting there anyway, he might as well read the book and see what it was about. Eventually, he found that he enjoyed biographies, and from that point on, he became an avid reader. Many students of diverse backgrounds, like this boy, need time to discover their own tastes and

interests as readers. SSR—with support for book selection—gives them this time.

Third, after SSR, teachers can add opportunities for students to share their books. SSR appears to be more effective in promoting students' motivation to read when it is accompanied by such a social component (Manning & Manning, 1984). Students need time to discuss their books, to be recognized as readers, to gather ideas about other books they might enjoy, and to recommend books to their peers. Such activities can be done quickly. The teacher can say, "I'm looking for three volunteers who are really enjoying the books they're reading. I want you to tell the class what makes your book so wonderful." Or the teacher can say, "I'm going to give you two minutes to discuss your book with the person sitting next to you." These and other social activities around SSR help to foster the classroom community of readers. In my research I have found that the community of readers is a class-wide phenomenon and tends to have an effect on nearly all students. In classrooms that had formed a community of readers, portfolio data indicated that most students had high levels of ownership of literacy, regardless of their proficiency as readers and writers (Asam et al., 1994; Au & Carroll, 1997).

By giving students of diverse backgrounds the chance to become part of a literate classroom community, teachers can increase motivation for reading, both from an aesthetic and an efferent stance. Given the present climate for instruction in most Title I schools, teachers will want to be especially aware of helping students to fall in love with books and to become lifelong readers.

Teachers' Roles

Dimension of balance. Pearson and Raphael (1999) discuss this issue in terms of the teacher's role in providing students with effective literacy learning experiences. Educators on one side of this issue believe that students learn most about literacy when teachers provide them with direct, explicit instruction in the skills and strategies they need. Educators on the other side of the issue argue that students learn most when they are engaged in meaningful literacy activities, with the teacher's role being that of a guide or fellow participant.

On one hand, traditional views of teaching tend to emphasize the role of the teacher in transmitting knowledge to the students. Metaphors associated with this view include that of the teacher pouring knowledge into an empty pitcher or writing knowledge onto a blank slate. Images of the empty pitcher and blank slate imply that students lack prior knowledge or the strategies needed for active engagement in the learning process. It is the teacher's job to take the initiative to make certain that they learn.

On the other hand, constructivist, process-oriented views of teaching tend to emphasize the role of the student in actively directing his or her own learning. This perspective highlights the nature of the classroom environment in promoting students' learning through discovery. The teacher's role is described in phrases such as "guide by the side" in order to recognize the centrality of the learner's efforts at meaning making.

The case for balance in terms of the teacher's role is perhaps better understood in the context of the gradual release of responsibility (Pearson & Gallagher, 1983). This concept suggests that the teacher starts with a high degree of control over students' literacy learning activities and gradually releases responsibility as students gain proficiency. Over time, the control exercised by the teacher decreases while that

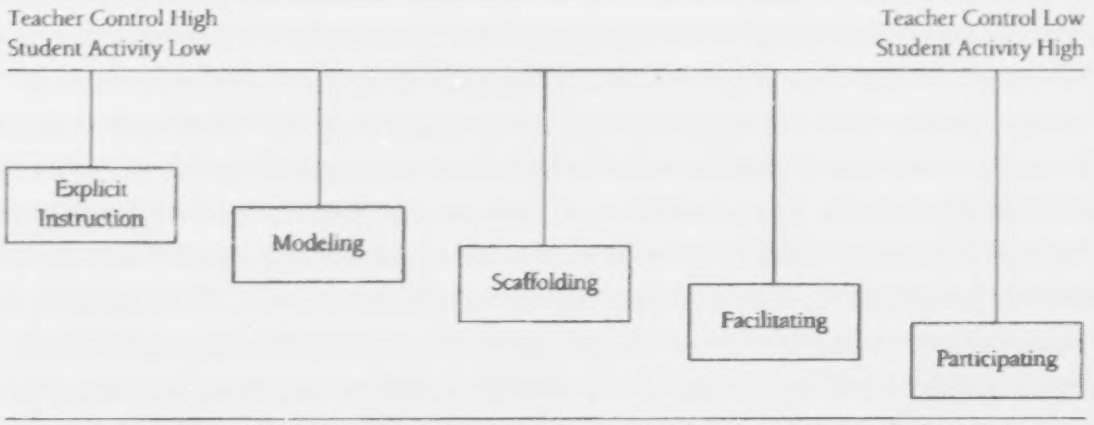
exercised by the students increases, because students have gained proficiency and are able to direct their own literacy learning activities.

As shown in Figure 1, Au and Raphael (1998) describe the teacher's roles in the gradual release of responsibility in terms of five types of instructional behavior: (1) explicit instruction, (2) modeling, (3) scaffolding, (4) facilitating, and (5) participating. The teacher has the most control and students the least when the teacher is giving explicit instruction, for example, during minilessons. Teachers have the least control and students the most when the teacher is participating alongside them, for example, during SSR or literature discussions. The framework presented by Au and Raphael indicates that there is a time and place for all the different roles a teacher may assume. The appropriateness or effectiveness of a given role cannot be determined a priori but must be judged in terms of the students' capabilities and needs as literacy learners.

Equity issues. My observations in Title I schools suggest that the balance has shifted sharply toward explicit instruction with some modeling, followed by practice book activities to be completed independently. There is little opportunity for teachers to engage in the roles of scaffolding (coaching students during ongoing reading and writing), facilitating (cueing students to apply strategies and skills previously taught), and participating (reading, writing, and discussing when students are engaged in these same activities).

The concern for equity raised by this state of affairs is that many students of diverse backgrounds are not receiving sufficient opportunity gradually to gain independence as readers and writers. My observations indicate that an overemphasis on direct instruction and the maximum role of the teacher leaves little time for the teacher to take on other roles and for the students to assume more responsibility and to carry out literacy learning tasks on their own.

FIGURE 1
Teachers' Roles



Au, K.H., & Raphael, T.E., (1998). Curriculum and teaching in literature-based programs. In T.E. Raphael & K.H. Au (Eds.), *Literature-based instruction: Reshaping the curriculum* (pp. 123–148). Norwood, MA: Christopher-Gordon. Reprinted with permission.

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The concept of the gradual release of responsibility and the continuum of teachers' roles serve to reinforce the point that teachers must move from taking a maximum role to taking a minimum role in literacy learning activities. This movement has a definite purpose in terms of students' literacy development, and that purpose is to promote students' independence in the application of the strategies and skills they have learned. If the teacher's role continues at the maximum level, students do not learn how to read and write on their own. Students of diverse backgrounds must be able to apply independently their local, global, and affective knowledge of reading and literacy. This independence is required not only if students are to do well on tests and other school tasks, but if they are to use literacy for their own purposes in everyday life. Literacy and literacy learning must become processes that students of diverse backgrounds engage in for themselves, rather than processes that are carried out for them.

Steps to achieve a balance. First, let's not throw the baby out with the bath water. Teachers should feel comfortable in continuing to provide explicit, direct instruction as a means of introducing students to new strategies and skills. Delpit's (1986) well-known argument still applies. She pointed out that students of diverse backgrounds need and deserve access to the codes of the culture of power or the skills of language and literacy to which mainstream students have ready access. These include phonics, grammar, spelling, pronunciation, and other skills that may be less available to students who speak a home language other than English or a nonmainstream variety of English. There should be an urgency to literacy instruction in Title I schools; students need to progress at a rapid rate if they are to keep pace with their mainstream peers. The time for learning a particular strategy or skill can often be shortened considerably by using explicit instruction to give students information it might take them a long time to figure out for themselves.

Second, once the strategy or skill has been introduced, teachers should begin gradually to release responsibility to students for the application of that strategy or skill during real reading and writing. Teachers use modeling, in the form of think-alouds, to show students how a proficient reader applies the strategy or skill when problem solving with text. Teachers use scaffolding, guiding students to apply the strategy or skill when they are reading or writing (cf. the concept of coaching in Taylor, Pearson, Clark, & Walpole, 1999). If students have difficulties, teachers provide them with help to get over the rough spots. Teachers use facilitating by reminding students, during ongoing reading and writing, to apply particular strategies and skills they have already been taught. Finally, teachers participate alongside students during times such as SSR, journal writing, or literature discussions, allowing students to gain independence while continuing to monitor and assess their performance. With normally developing readers, teachers may find that responsibility may be released with relatively little time in the middle phases of instruction. However, with struggling readers, extensive scaffolding and facilitating are usually required.

Teachers must be aware that an overreliance on explicit instruction may deprive students of diverse backgrounds of the opportunity to gain independence as readers and writers. To prevent this problem, teachers should remember to strike a balance and incorporate other roles—modeling, scaffolding, facilitating, and participating—that provide for a gradual release of responsibility to students.

Skill Contextualization

Dimension of balance. Pearson and Raphael describe the issue of skill contextualization in terms of the degree to which skills such as phonics and grammar—or strategies such as comprehension, composition, and literary analysis—are taught as part of the reading of particular texts, especially literature. At one extreme are teachers who closely follow a program's scope and sequence chart, which prescribes the skills and strategies to be taught in a set order. At the other extreme are teachers who teach specific skills and strategies only when teachable moments occur during reading.

Pearson and Raphael (1999) recommend that teachers work flexibly between these two extremes. They give the example of teaching about point of view while students are reading historical fiction about the U.S. Civil War. This is a sensible approach because it fits so well with the reading, even if this literary element happens to be scheduled for a later time in the school year according to the scope and sequence chart. A further example is teaching the /fl/ blend in *flames* while reading Bunting's (1999) *Smoky Night* to a group of second graders, only because the /fl/ blend happens to be next in the scope and sequence chart. This choice does not make sense because of the danger of trivializing this powerful piece of literature, and because of the likelihood that other opportunities to teach the /fl/ blend can readily be found. The balance sought is between teaching skills and strategies at times when they can be made meaningful to students in connection with literature, and ensuring that all the important skills and strategies usually covered at a given grade level have, in fact, been presented to students.

Equity issues. A concern for equity is raised because the instruction of strategies and skills in many Title I schools seems to be entirely driven by a set scope and sequence chart. Allington (1997) cautions that there is no research validating any particular set sequence of skills as superior to any other. One concern is that educators in many Title I schools have pinned their hopes on programs based on such set sequences of skills, and that these hopes may not prove to be justified. Due to the time and effort devoted to the implementation of these programs, students may be deprived of other opportunities for skill and strategy learning that may be critical to their development as readers and writers. These include receiving skill and strategy instruction in the context of reading literature and composing their own pieces, when such instruction will make sense and be meaningful to students. The concern for equity is that students of diverse backgrounds need and deserve a variety of lessons and situations in which they can learn and apply skills and strategies. At present, the danger appears to be that students are only receiving lessons based on a set sequence of skills, and that they are being deprived of learning opportunities that arise from teachable moments during ongoing reading and writing.

Steps to achieve a balance. First, teachers should continue to be guided by any scope and sequence charts they have found useful. These charts do not differ much from one another and provide teachers, particularly beginning teachers, with useful guidance about the skills and strategies usually taught at a given grade level. However, teachers should remember that, while scope and sequence charts provide guidance about what should be taught, they are no guarantee of what students will learn.

I am frequently asked by teachers if their school should adopt a set scope and sequence chart so that everyone will know exactly what skills and strategies are to be covered at each grade. This question often reflects the frustration experienced by teachers in Title I schools, particularly at the upper grades, due to their students' low level of reading and writing proficiency. For example, fourth-grade teachers observe that some of their students do not consistently write sentences beginning with a capital letter. These teachers suspect that the teachers at the lower grades are not teaching students all the skills they are supposed to be covering. They believe that, if the lower-grade teachers would do their job, they would not have to repeatedly cover such basic skills in their own lessons.

If these teachers could observe in the classrooms of their colleagues, they would see that every teacher, beginning in kindergarten, has introduced students to the idea of writing sentences beginning with a capital letter. True, not every teacher is equally effective in providing skill and strategy instruction. Nevertheless, the skill has been covered time and time again. Obviously, the problem is that there is a difference between what teachers teach and what students learn. In the case of a basic skill such as capitalization, it is likely that students do have knowledge of the skill but lack the motivation to apply it.

This brings me to the second step, which is that teachers must not only teach skills and strategies but make sure that students have gained the independence and motivation to apply these skills and strategies when they read and write. Let's begin with the issue of independence. If there is anything I have observed in Title I schools, it is that students receive a great deal of explicit skill instruction. A skill is covered and students practice it in their workbooks, but they receive little or no teacher guidance in the forms of modeling, scaffolding, and facilitating, as described earlier. As a consequence, students do not gain independence in applying the skill. When the teacher at the next grade level observes students' failure to use the skill, he or she often assumes (incorrectly) that students need more direct instruction. And so the cycle continues.

Now let's turn to the issue of motivation. Besides a lack of independence in the use of skills, I believe it is a lack of ownership of literacy (what Fitzgerald [1999] calls affective knowledge) that contributes to the low levels of skill application often seen in students of diverse backgrounds. In Title I schools it is not uncommon to observe students in the third grade and above simply going through the motions in school. If students have not fallen in love with books, if they have not learned to write from the heart, they come to lack the motivation to participate in school literacy lessons. That is why my preferred definition of instruction begins with the idea of getting students interested and involved in an activity (Au, 1993). Once students are committed and engaged, they have a willingness to learn and apply skills in order to complete the activity successfully. For example, students will learn to decode new multisyllabic words correctly in the course of reading a book they find of high interest. Engaging, high-interest literacy activities—such as listening to the teacher read a Harry Potter book aloud or reading a Harry Potter book on one's own—create teachable moments, because motivated students often challenge themselves with tasks or texts that might otherwise seem beyond them. Teachable moments provide the best opportunities for the learning of skills, because they are often associated with high levels of

student motivation and interest. A teacher who wants to deliver powerful skill instruction will always want to make the most of these moments.

Teachers should appreciate the wisdom of being guided by knowledge of the scope and sequence of skills and strategies typically taught at a given grade level. At the same time, they must recognize the danger in blindly following any scope and sequence chart. No such chart has been backed by research suggesting that it provides the ideal sequence for teaching skills and strategies. Given this state of affairs, teachers are well advised to use their own judgment and to teach particular skills and strategies at the moments when such instruction will make sense and be meaningful to their students.

Curricular Control

Dimension of balance. Pearson and Raphael (1999) frame this issue in terms of the tension between local control and distant control. Local control is represented by educators in the schools who have immediate, detailed knowledge of the students and their needs as readers and writers. Logically, it seems that teachers who work with students on a daily basis should have the greatest say when it comes to decisions about curriculum and instruction. Yet sources of distant control, such as policymakers at the state or national levels, can have a substantial influence on decisions about curriculum and instruction. These policymakers may exert control by mandating programs and textbooks to be used, by specifying standards for students' learning, and by establishing testing or other systems of accountability.

On one hand, I believe that teachers should have the final word when it comes to decisions about curriculum and instruction in their schools. Teachers have a detailed knowledge of their students obtained from their daily work in classrooms, and they should have the right to choose the curriculum they feel will best meet their students' needs in learning to read and write. I would add the caveat that educators at the local level can make sound decisions about curriculum only when they have made a concerted effort to keep current in their knowledge of literacy research and practice. This knowledge is a necessary adjunct to their knowledge of the local situation. In addition, local control over curriculum is a longstanding tradition in the United States, a tradition that it makes sense to uphold given the diversity among and within communities.

On the other hand, I believe that teachers need to understand why sources of distant control have gained so much power over education at this time. We as educators must recognize that the general public has lost confidence in public education and in educators as professionals. (It is beyond the scope of this chapter to take up the question of why the public has such a poor image of the accomplishments of the U.S. public school system and the achievement of its students; useful readings on this topic include Berliner and Biddle [1997] and Spring [1997].) We need to restore public confidence in our work with students. To accomplish this goal, schools must learn to work effectively with standards and to provide solid evidence of students' learning. The needed balance, as I see it, is that teachers should have the right to make decisions about curriculum and instruction consistent with their knowledge of their students and their professional values. At the same time, they must respond to the public's concerns by addressing higher standards and showing improved results in terms of students' learning.

Equity issues. The imbalance I see is that, in many Title I schools, sources of distant control have come to exert an undue influence. As Pearson and Raphael imply, the concern about equity raised by the imbalance in favor of distant control is that students of diverse backgrounds may be deprived of the kind of instruction that those who know them well—their teachers—believe will be of greatest benefit.

I find that the present imbalance in favor of distant control is leading to a second concern about equity, and this concern centers on efforts to limit teachers' professional development. I believe that teachers' professional development, not preset reading programs, is the key to improving the literacy achievement of students of diverse backgrounds. A popular means of exercising distant control over schools has been the mandating of programs. The message conveyed through this strategy is that the solution to improving students' literacy achievement is implementing the right program, not developing teachers' expertise. This approach short-circuits the kind of long-term, school- and community-based curriculum development efforts that yield consistent improvements in students' achievement over time (cf. Mosenthal, Lipson, Sortino, Russ, & Mekkelsen, 2002). The concern about equity raised by the imbalance in favor of distant over local control is that the emphasis on mandated programs is lessening teachers' opportunities to develop and tailor curricula at the school level to meet students' literacy learning needs.

The position statement of the International Reading Association (1999) on the use of multiple methods in beginning reading explains why teachers' professional development is so important. As the statement notes, all of the numerous studies of approaches to the teaching of beginning reading show that a given approach works well for some students but not others. No approach has ever been shown to produce exceptional results for every student. This finding is hardly surprising given what is known about group and individual differences among students, as well as differences among schools and communities. Research suggests, then, that there is no one best way of teaching beginning reading, or reading beyond that level. If the aim is to reach every student, the teacher must be prepared to adapt the existing program to meet the instructional needs of students who are not benefiting from the program's overall approach. The concern about equity is that mandated programs tend to limit teachers' abilities to make the needed adaptations. Thus, many students of diverse backgrounds may not have access to instruction tailored to their needs as literacy learners. Teachers may not implement the needed adaptations if they have been led to believe that following a program in a lockstep fashion will do the job for all students. Or teachers may lack the broad knowledge of literacy research and instruction needed to make adaptations, if they have not received ongoing professional development beyond the confines of a single program.

Steps to achieve a balance. First, schools that lack the resources to develop their own literacy curricula can certainly decide to adopt an existing program. However, the process of adopting a new program should be a long-term, systematic one. The adoption process offers an opportunity to lay the foundation for lasting improvement in the school's literacy efforts. The process should begin with a whole-faculty discussion of the philosophy that should underlie these efforts. This discussion results in a vision statement describing the excellent reader who will graduate from the school (for further discussion of this process and a sample vision statement, refer to Au [2002]). The decision

about the school's new reading program can then be made in a principled manner, for example, by devising a checklist to assess the extent to which the programs under consideration will support teachers in achieving the school's vision of the excellent reader.

Second, schools should treat an adopted program as a step along the way toward developing their own literacy curriculum, rather than as a quick fix or final solution. Allington and Walmsley (1995) remind us that there is no quick fix for improving literacy achievement in Title I or other schools. Schools successful in improving students' achievement make a commitment to a process of change that can take five years or more (Mosenthal et al., 2002). Once a school has adopted a new program, teachers should give the program a sincere test with an eye toward understanding its strengths and weaknesses in meeting the literacy learning needs of the students in their classrooms. Few preset programs are designed to build all three types of knowledge: local, global, and affective. Discussions should focus on evidence, obtained during ongoing assessment, of students' learning of all three types of knowledge. Principals should be sure to allocate considerable time for faculty discussions, preferably during each quarter of the school year. The idea is to promote teachers' abilities to conduct a critical analysis of the program and their own instruction, always with an eye toward students' learning.

Over time, these discussions should move from analysis of the existing program to a serious consideration of the characteristics that should define the school's own literacy curriculum. This curriculum should be tailored to the students and their community, as well as to the strengths of the faculty. Thus, the third step is to take on the task of curriculum development at the school level, building on the foundation of knowledge and experience gained from working with the adopted program.

In my experience, change that makes a difference in Title I schools is change that comes from within the school itself. Decision makers, schools, and teachers alike must stop the futile search for the perfect program and realize that the preferred literacy curriculum for the students at any school is one tailored specifically to meet their needs by the educators who know them best. These educators must be well informed, and they must be guided through a long-term process of change by dedicated leaders who are sophisticated enough to see through the illusion of the quick fix.

Change imposed on the school by distant forces can be viewed as positive if it provides the occasion for the faculty to begin the journey toward improving student achievement over the long term. A school should begin change efforts in reading instruction by developing a vision of the excellent reader who will graduate from that school. Schools that lack the resources to undertake their own curriculum development efforts may then decide to adopt an existing reading program that will support teachers in achieving the vision of the excellent reader. This reading program is not seen as the final answer but as a step on the way toward developing a curriculum customized by the faculty to meet the needs of the students in their school and community.

Conclusion

Many students of diverse backgrounds in Title I schools struggle with learning to read and write. Teachers can strengthen the instruction for these students by being aware of the five dimensions in which balance is presently lacking in many Title I schools. To begin, teachers must

make evident the connections between literacy and students' own lives, so that the importance of literacy learning becomes crystal clear to students. A balance must be struck between doing school and doing life. In achieving this balance, affective knowledge, or students' ownership of literacy, should receive the attention necessary to motivate students to acquire local knowledge (including phonics) and global knowledge (including comprehension processes). By guiding students of diverse backgrounds to become members of a literate classroom community, teachers can increase their motivation for reading, from both an aesthetic and an efferent stance. We must strive to correct the imbalance in favor of local knowledge over affective knowledge that causes us to lose sight of the larger goal of helping students to fall in love with books and to become lifelong readers.

Teachers must seek systematically to build the independence of students of diverse backgrounds as readers and writers. Explicit instruction provides a sound starting point, but it must be followed by teacher modeling, scaffolding, facilitating, and participating. Attending conscientiously to the need for all of these roles ensures that teachers gradually release responsibility for literacy learning to students. Instruction in skills and strategies may well be guided by a scope and sequence chart. However, teachers who recognize the power of teachable moments will not hesitate to depart from the set sequence of skills and strategies when it makes sense to do so.

I have argued that the curriculum most likely to meet the needs of students at a particular school is a custom-made curriculum developed by the teachers at that school. However, I have also suggested that there is no need to reinvent the wheel. An existing program may serve as a useful starting point in the school's long-term process of curriculum development. Teachers' thoughtful analyses of the existing program will reveal its strengths and weaknesses, and teachers can decide then which features to carry forward into the school's own curriculum. This curriculum should reflect a balance in the five dimensions highlighted in this chapter and be tailored to the literacy needs and interests of the students in each school.

Existing programs must be seen as useful tools, not the answer to improving the literacy achievement of students of diverse backgrounds and sustaining such improvements over a significant period of time. Teachers in the schools must be supported in gaining the broad professional expertise and confidence to engage in the process not just of implementing but of developing and adapting literacy curricula. Only then can we hope to reach each and every student, and only then can we hope to close the literacy achievement gap.

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CHAPTER 6

Formulating a Research Agenda About *Reading for Understanding*

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THIS CHAPTER—a report from the RAND Reading Study Group (RRSG) chaired by Catherine Snow and presented at the conference by Anne P. Sweet, Donna E. Alvermann, Michael L. Kamil, and Dorothy S. Strickland—provides another approach to defining comprehensive reading instruction. The report is a product of the initial deliberations of RRSG and commentary on that report based on feedback from the field. The RRSG solicited broad input from the field by posting the initial draft on a website that allowed commentary by readers (see http://www.rand.org/multi/achievementforall). The panel organized its draft around a set of components that met a set of criteria including the following:

1. There is good evidence that they are essential for reading comprehension.
2. They are distinguishable from one another.
3. They are relevant to many different reading tasks.
4. They function both individually and in various combinations for successful reading comprehension.

The final report, which was published by RAND in spring 2002, is intended for use by the Office of Education and Research Improvement (OERI) to develop solicitations for a major program of research in reading.

In the fall of 1999, the Department of Education's Office of Educational Research and Improvement (OERI) asked RAND to examine ways in which OERI might improve the quality and relevance of the education research funded by the agency. As part of this work, RAND convened two study groups in the areas of reading and mathematics education to develop long-term programs of research in the two respective fields. This report is the initial draft of the RAND Reading Study Group (RRSG), which sets forth a framework for a program of research in reading comprehension.[1] It is proving to be the starting point for a major discussion among researchers, practitioners, and policymakers about needed research and development related to reading comprehension.

This report is the product of initial deliberations of the RRSG, which consists of 14 experts representing a range of disciplinary and methodological perspectives on the field of reading. In further deliberations, the RRSG devised a plan for revision, based on preliminary commentary from peer reviewers and the field (all of which is posted on the RAND website). The positions of the study group report must be further tested in discussion and debate, and ultimately in research and practice. The impending revised report, as amended by the comments from the field and further deliberations of the study group, is intended to be used by OERI staff in developing solicitations for a major program of research in reading.

To promote the building of active research and practice communities, the study group reports have been distributed widely. This report was available on a public website (http://www.rand.org/multi/achievementforall) along with external reviews from eight experts in reading research and practice, and a plan for revision. The website allowed visitors to comment directly on the report and to participate in discussions around key issues in the reading field. In addition, the report is being presented and discussed at all appropriate professional meetings. The RRSG used the input collected to create a revised version of this report in spring 2002, which was then posted to the aforementioned website. We anticipate that the report will be a "living document" that is regularly revised over the course of the program.

Introduction

This draft report from the RAND Reading Study Group (RRSG) formulates an initial proposal concerning the issues that the community of reading researchers most urgently needs to address over the next 10 to 15 years. We encourage readers of this draft version to respond with feedback about our summary of the issues, the coherence of our model of reading comprehension, and our sketch of the research enterprise. Ultimately, this document may become the basis for a more formal agenda setting. At this point it is an invitation to join a conversation about an area of great practical importance: reading comprehension.

The proposed research agenda builds upon a number of recent efforts to summarize the knowledge base in the field of reading. These efforts include the National Research Council report on *Preventing Reading Difficulties in Young Children* (Snow, Burns, & Griffin, 1998), the *Report of the National Reading Panel* (National Institute of Child Health and Human Development, 2000), and the third volume of the

1 The revised report has been published: RAND Reading Study Group. (2002). *Reading for understanding: Toward an R&D program in reading comprehension*. Santa Monica, CA: RAND. The full report is also posted on the RAND website, http://www.rand.org/multi/achievementforall

Handbook of Reading Research (Kamil, Mosenthal, Pearson, & Barr, 2000). Given the availability of these and other older sources, the RRSG did not see the need to replicate recent efforts to synthesize the knowledge base concerning initial reading and its implications for instruction and assessment of the general population.[2]

The RRSG is composed of 14 experts who represent a range of disciplinary and methodological perspectives on the field of reading. This group met twice for a total of seven days, with writing and discussion between the meetings, to establish a convergent perspective on what is known about reading, what are the most urgent tasks in developing an integrated research base, and what needs to be done to improve reading outcomes. The RRSG decided early in its deliberations to concentrate on the development of comprehension and the capacity to acquire knowledge through reading. This field in the accumulated knowledge base is limited to particular areas and to particular populations of students. We need to develop a more coherent map of the research on reading comprehension by determining where the most urgent gaps in our knowledge are, by developing networks of communication among researchers currently working in several different research traditions, and by working with teachers and teacher educators to translate research into practice.

What is the core problem within the field of research on reading comprehension? At one level, the core problem is the construction of a unifying theory that acknowledges its own complexity and is informed by the multiple perspectives (including educational, cognitive, linguistic, sociolinguistic, discourse analytic, and cultural) that have been brought to bear in the design and conduct of literacy research. Considerable research has been directed at issues of reading comprehension, but these research efforts have been neither systematic nor interrelated. At another level, the core problem presents itself in a practical form when a sixth-grade teacher turns to research with the question, "What should I do with my students who don't understand their history texts or can't learn from reading science texts?" Teachers with such questions encounter only a partial knowledge base. That knowledge base typically does not sufficiently acknowledge the demands of the classroom, does not attend simultaneously to the demands of reading to learn during content area instruction while still learning to read, and may not be relevant to the reading profiles of many students in a diverse class. Given the enormous educational importance of promoting reading comprehension and learning among elementary and secondary students, we need to organize what we know about these topics, define what we need to know, and pursue the research that will be most important for improving teacher preparation, classroom instruction, and student achievement.

The purpose of the RRSG, then, is to summarize the state of research and research-based practice in the field of reading comprehension, in order to generate a well-motivated agenda for future research that will inform practice in this area. This specific document is a first attempt at describing such a research agenda, formulated so as to elicit commentary from the broadest possible constituency of reading researchers. Because the RRSG did not undertake the kind of

2. Given the availability of these three recent research syntheses, and many additional review papers and volumes (e.g., the first two volumes of the *Handbook of Reading Research*), this report does not provide individual citations for claims made. We append a bibliography of integrative sources on which we have relied. Because this was an attempt to generate consensus about a research program, we do not make claims based on single studies.

extensive, expensive, exhaustive review that informed both *Preventing Reading Difficulties in Young Children* (Snow, Burns, & Griffin, 1998) and the *Report of the National Reading Panel* (National Institute of Child Health and Human Development, 2000), relying instead on consensus and on the distributed knowledge base of its members, this document should be seen as a stimulus to discussion rather than a summative statement.

Issues Motivating This Report

The proposed research agenda is motivated by a number of overarching issues of concern to the research and practice communities:

- The demand for literacy skills is high and increasing.
- The level of reading skills is remaining stagnant.
- Reading comprehension instruction is often minimal or ineffective.
- High-stakes tests are affecting reading comprehension instruction in unknown ways.
- The preparation of teachers does not adequately address children's needs for reading comprehension instruction.
- Making good on the federal investment in education requires more knowledge about reading comprehension.

What We Know

While these various overarching issues may make the task of developing a research agenda that would contribute to the improvement of practice seem formidable, we are encouraged by the recognition that there is a good deal we already know in addressing the practical challenges of improving reading comprehension outcomes.

First, we know some of the prerequisites to successful reading comprehension. We know, for example, that reading comprehension capacity builds on successful initial reading instruction and that children who can read words accurately and rapidly have a good foundation for progressing well in comprehension. We know that children with good oral language skills (large oral vocabularies, good listening comprehension) and well-developed stores of world knowledge are likely to become good comprehenders. We know that social interaction in homes and classrooms as well as the larger sociocultural context influences motivation and participation in literate communities and helps construct students' identities as readers, thus influencing their access to text. We know that children who have had rich exposure to literacy experiences are more likely to succeed. We know about several instructional practices that are related to good reading outcomes, although such knowledge is much more extensive for initial than for later reading. Finally, we know that instruction based on an appropriate and well-articulated alignment between curriculum and assessment can improve performance in reading as well as other areas.

We also know several approaches to education and to reading instruction that do not work. We know, for example, that many approaches to compensatory education for socially, economically, and educationally disadvantaged groups do not promote success in reading comprehension. We know as well that identification of children as learning disabled, without specific instructional treatments tailored to their individual needs, fails to generate reading comprehension gains. We know that current approaches to teaching second-language learners, whether in ESL, bilingual, or all-English settings, often do not address the particular challenges of reading

comprehension. We know that the enormous complexities of teaching and the brevity of teacher education programs have the unfortunate consequence that the vast majority of novice teachers are ill-prepared to engage in practice that reflects the existing knowledge base about reading. We know this situation is particularly critical for special education, ESL, and bilingual teachers who, while requiring an even deeper understanding of reading, language, curricula, and instructional practices than the mainstream teacher, in fact have even fewer opportunities in their preparation programs to acquire this expertise. We know that professional development in the domain of early reading instruction is improving, increasingly incorporating information from research about the characteristics of good instruction, but that is not the case for reading comprehension instruction in the later elementary grades. We know that a frequent consequence of failure on high-stakes assessment, namely retention in grade, does not improve long-term reading achievement without specialized instruction. Finally, although we have a fairly long list of instructional strategies that have been shown to be effective in targeted interventions or experimental settings, we need to know how to implement these teaching approaches on a large-scale basis, into a coherent reading program that spans the elementary, middle, and high school grades.

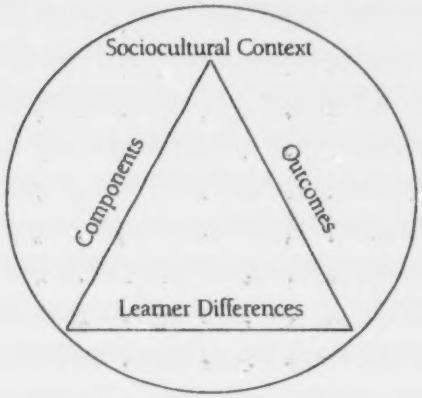
Defining Reading Comprehension

We define reading comprehension as the process of constructing meaning through interaction and involvement with written language. The reading comprehension process includes the following dimensions: the cognitive components involved, the outcomes, and reader differences. These dimensions define a phenomenon that occurs within a larger sociocultural context (see Figure 1), which shapes and is shaped by the reader, and which comes into contact with each of the dimensions, influencing knowledge, processing, purposes, outcomes, and the nature of reader differences. The sociocultural context affects students' acquisition of the reading components as well as their demonstration of outcomes, and often is a source of individual and group reading differences. It mediates students' experiences, just as students' experiences influence the context.

Preliminary commentary received on this draft led to a fundamental shift in our conception, as displayed in Figure 2, where the dimensions are displayed as reader, text, and task—all of which are viewed within the larger sociocultural context. As some reviewers noted preliminarily, we seriously downplayed the role of text in presenting our map of the reading comprehension territory. Text will receive more attention in a revision. Many commentators have taken us to task for our somewhat anemic representation of sociocultural context in our original "model." We will attempt to give context its due in a revision, acknowledging the importance of the microcontexts of classroom and family as well as the larger sociocultural forces that help shape and are shaped by the resources available to the learner, the definition of the task, and the interpretation of the text.

Readers comprehend texts by extracting and creating meaning. Successful comprehension entails a variety of prerequisite skills, abilities, and knowledge. A reader must be motivated and engaged with the text and must have a purpose or a goal for reading. Readers use a variety of cognitive and metacognitive strategies to draw on their knowledge to arrive at a meaning. Among the kinds of knowledge a

FIGURE 1
Initial Heuristic for Thinking About Reading Comprehension



Note: The three dimensions of reading comprehension form the sides of a triangle, to indicate perspectives that all must be considered in the analysis of reading comprehension. The triangle is displayed within a circle representing the sociocultural context within which any act of reading must be interpreted.

reader uses are world knowledge, linguistic knowledge, discourse knowledge, and vocabulary. In addition, readers have to process many nonprint sources of information (such as pictures, tables, charts) to comprehend the text fully. Fluency is also an important element in comprehending text. That is, in order to orchestrate the components of comprehension, a reader should be able to do oral reading with reasonable speed, accuracy, and expression.

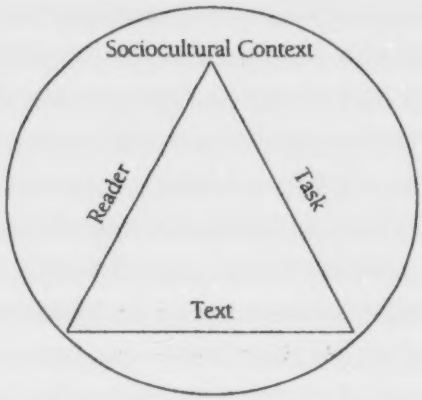
The end of comprehension can be the acquisition of knowledge or the confirmation of knowledge. Comprehension can also lead to applications, as in following directions. Or comprehension can lead to involvement in the meaning of the text, as when a reader gets lost in a story.

Although we can describe an archetypal process of comprehension, we must also describe the sources of variation that are reflected in individual acts of comprehension. All readers have different knowledge and strategies for interacting with text. Consequently, comprehension is different between and among readers as a function of those differences. These differences account for the variations in comprehension between readers and for differences in the same readers at different times for different tasks. Some of these differences depend on the tasks, developmental stages, social, cultural, and language backgrounds of the readers. The sociocultural context in which reading occurs imposes values and restrictions on meaning for what is read, why it is read, and how it is to be interpreted.

Components

Reading comprehension is, in part, made up of a set of cognitive components and processes.

FIGURE 2
Revised Heuristic for Thinking About Reading Comprehension



These can be conceived of as the various things that have to happen, in some combination, when an act of comprehension while reading occurs. These components interact in combination during comprehension activities. Virtually every component we discuss has a processing aspect (i.e., cognitive operations and procedures) and a content aspect (i.e., language codes, knowledge structures). We started by sifting through the research literatures to select the components that met the following criteria:

- There is good evidence they are essential for reading comprehension.
- They are distinguishable from one another.
- They are relevant to many different reading tasks.
- They function both individually and in various combinations for successful comprehension.

Nine components fulfilled these criteria. These represent, in our view, components that are used when reading in order to generate comprehension of the text. For each of these, we evaluated the research base with two questions in mind: (1) Is there sufficient knowledge about the component itself and about its relation to reading comprehension? (2) Is the available knowledge being utilized in practice (instruction, design and selection of materials, and teacher preparation)? Using this information, we established for each of the nine components a sense of the need for further research of either of two types: research to expand our knowledge base about the component itself, and research to develop, implement, and evaluate instructional applications grounded in the knowledge base. We discuss each of the nine components in turn, including examples of questions that might form part of the research agenda associated with each. The questions presented in this portion of the document are meant to be examples of how questions could be focused on each of the components. They all represent questions we consider important, but they have not been prioritized. We discuss in a final section of this document our process for assigning priorities to various topics. Assigning priorities to specific questions should, we argue, await feedback from the field.

Vocabulary. We use the term *vocabulary* here to refer specifically to knowledge of word meanings. The large body of research on vocabulary has consistently shown the importance of vocabulary knowledge for comprehension. This relationship is remarkably robust across ages and populations. Recent analyses of vocabulary instruction show that explicit vocabulary instruction produces gains in comprehension. Despite these findings, current practice deemphasizes vocabulary instruction, in part because traditional, definition-based approaches to vocabulary instruction are not very effective, either for increasing vocabulary or for improving reading comprehension.

Questions include the following:

- What vocabulary should be taught?
- How much vocabulary should be taught?
- How should teaching methods be adapted for different categories of vocabulary words?
- What is the optimal combination of focus on individual words and word-learning strategies?
- What knowledge, skills, or abilities are needed to benefit from vocabulary instruction (e.g., dictionary skills, metalinguistic abilities, language proficiency levels)?
- What are effective methods for increasing the reading vocabulary of learners of English as a second language?

World knowledge. World knowledge comes from experience and from texts previously read. A large amount of research has demonstrated the importance of world knowledge for reading comprehension. We know that most children from middle-class families enter school with more world knowledge about school-related topics than do most children from poor families. We also know that children from working class or ethnic minority families often enter school with specific knowledge related to their own cultural and community backgrounds, which teachers may not make relevant to the texts being read. When the knowledge that readers bring to the reading of a text is untapped, comprehension is imperiled.

Questions include the following:

- How do readers coordinate world knowledge with texts and generate relevant inferences?
- How does lack of appropriate world knowledge influence reading comprehension?
- What are the conditions under which world knowledge interferes with or facilitates reading comprehension?
- What factors help or hinder students in making connections between text and their knowledge of the world?

Motivation. Reading motivation is multifaceted; that is, motivation consists of a number of aspects. First, children with a strong sense of competence or efficacy are likely to engage and achieve. Second, research suggests that when children are intrinsically motivated to read, value reading highly, and are mastery-goal oriented, they are more likely to engage and achieve in reading. Third, extrinsic motivation such as recognition and competition are associated with reading achievement and amount of reading. Motivation often is considered a characteristic of the individual. However, instructional practices and other classroom context factors strongly influence children's motivation. There are needs for instruction supportive of reading motivation as well as assessments that measure

aspects of students' motivation and self-efficacy in reading.

We note from various comments that it is appropriate to specify factors such as motivation, reader purposes, or instruction as related to reading. We will revise the document to speak of *reading instruction* or *reading motivation*. We want to avoid any implication that we recommend the study of instruction for motivation in general, apart from reading and reading comprehension. Recognizing the scope of our task, we will make clear in the revision our decision to opt for specifying a research agenda focused rather specifically on reading comprehension that may need to play itself out within a context of research that addresses the larger picture. Accordingly, while we acknowledge the enormous importance of factors such as self-regulation for any successful learner, we will not consider such factors in our deliberations unless their functioning seems specific to reading comprehension.

Questions include the following:

- How can reading motivation and self-efficacy in reading be conceptualized in terms of existing motivation theories, and new, theoretically grounded descriptions of motivation for different populations of readers, texts, contexts, and ages?
- How does reading motivation relate to reading comprehension, both directly, and as it may be mediated through behaviors such as amount of reading, and use of cognitive reading strategies?
- What are the characteristics of texts and textbooks, such as personal or cultural relevance, structure of text, and vividness of details that make them interesting?
- How is reading motivation influenced by context variables such as task success, hands-on activities, (e.g., science observation, historical reenactment), autonomy support, personal or cultural relevance, and teacher/peer characteristics?

Purposes and goals. Students who are expert readers are purposeful. They have specific goals for reading, such as gaining knowledge, enjoying literature, locating specific information, and learning from text in order to solve problems. Students with clear goals are better comprehenders than students with vague goals. Goals also may be motivational and social. For example, students with the motivational goal of mastery use better reading strategies than students with the performance goal of gaining recognition as a good reader.

Questions include the following:

- How do students' purposes for reading about a topic relate to their knowledge level, their interest, and their competence in using other reading strategies?
- What are the purposes for reading that increase reading comprehension most strongly for specific populations of readers?
- What are the purposes for reading that increase reading comprehension most strongly for various types of readers?

Cognitive/metacognitive strategies. Strategies are processes and procedures that readers use to comprehend text. Some of these strategies reflect conscious awareness whereas others are acquired without conscious effort or become automatic with practice. A strategy is regarded as metacognitive if its use is triggered by the reader's assessment of his or her own cognitive state; for example, the reader slows down when reading text on an unfamiliar topic or rereads a sentence that contradicts previously held beliefs. Cognitive and metacognitive strategies

have been extensively investigated in the fields of cognitive psychology, cognitive science, and education during the last four decades, so there is an abundance of mature theories that are grounded in empirical research. Some individual strategies have proven to be effective in laboratory, group, and classroom environments (such as comprehension monitoring, question generation, the construction of explanations, and the construction of story structures). Some strategies have been frequently investigated in the laboratory, but rarely in the classroom (such as building coherent mental models of what the text is about, generating particular classes of inferences, and integrating the current text with other texts). There is little knowledge available about the prerequisites to effective strategy instruction.

Questions include the following:

- Under what conditions can students learn comprehension strategies most effectively?
- To what extent are the strategies effective at different ages and levels of ability?
- To what extent is the effectiveness of these strategies dependent on domain knowledge?
- At what age and under what conditions can bilingual students acquire and use cross-linguistic knowledge and strategies to improve their reading comprehension?

Linguistic knowledge. Linguistic knowledge encompasses oral language capacities, both production and comprehension, and the capacity to reflect on one's knowledge of language. Successful reading depends on extensive knowledge at all linguistic levels—phonology, morphology, and syntax, as well as higher level discourse structures. Children's oral language knowledge has been shown to contribute to their reading comprehension in a variety of ways. Children's awareness of language units and structures also contributes to reading comprehension. Although the relationship between linguistic knowledge and reading comprehension is well documented, there are a number of research questions that still need to be addressed.

Questions include the following:

- Syntactic knowledge is presumably both a contributor to, and consequence of, growth in literacy. What is the nature of the relationship between syntactic knowledge and growth in literacy, and how can it inform our understanding of reading comprehension?
- What type of metalinguistic knowledge and abilities contribute to reading comprehension?
- What linguistic features differentiate electronic text, hypertext, and multimedia from conventional texts?

Discourse knowledge. Expert comprehenders use discourse knowledge to connect text elements in a coherent fashion and to relate the content to the messages of the author. Discourse knowledge includes the structure of different text genres (e.g., narrative, expository, persuasive), the distinction between given (old) and new information in the discourse context, the points (main messages) that the author intends to convey, the topic structure, the pragmatic goals and plans of the communicative exchange, and the function of speech acts (e.g., assertion, question, directive, evaluation). Discourse knowledge builds on linguistic knowledge but is distinct from it. A moderate amount of research has been conducted in the fields of discourse processing and education,

but more basic research is needed. Children's understanding of narrative text has been extensively investigated, whereas the comparative lack of studies of expository text and the prevalence of expository texts in the later school years give this topic considerable urgency for all ages and dimensions of reader differences. There is a complex interaction between world knowledge and discourse knowledge that needs further exploration.

Questions include the following:

- How is discourse knowledge of print acquired?
- How do readers understand the structure of expository texts with different structures (e.g., problem-solution, claim plus evidence, cause-effect)?
- How do readers understand the pragmatic function of sentences and utterances conveyed in the text?

Fluency. Fluency is defined as effortless reading with ease and expression. Fluency includes accuracy and automaticity of word identification, ease in decoding, and expressiveness in reading connected text. It presumes accurate word identification and decoding ability. We have extensive knowledge of these latter two components, including basic research on the relation of fluency to comprehension and findings concerning classroom practices to promote fluency. There is ample evidence that the most effective instructional method for all types of children integrates explicit instruction about the alphabetic principle with attention to comprehension. Explicit instruction programs, however, often have not adequately addressed the fluency component of comprehension. More research on the relationship of fluency to vocabulary and comprehension needs to be done.

Questions include the following:

- What are the characteristics of effective interventions to improve fluency for poor comprehenders, including the amount of reading or rereading that is involved and the nature of the feedback?
- How is the relationship among practice, fluency, and reading comprehension affected by the type of text read?
- What is the relationship between fluency and comprehension for readers of English as a second language?

Integrating nonprint information with text. Reading comprehension often requires the integration of print and nonprint information, such as graphs or pictures. In electronic text, there are often multimedia components (e.g., sound or video information) that need to be integrated with text for efficient reading comprehension. Use of electronic text is widespread and rapidly becoming commonplace in schools and classrooms. However, there is very little knowledge about the processes involved in multimedia integration. Because the amount of multimedia information is increasing so rapidly, there is an urgency to determining the ways in which this information can be processed effectively. Instructional research has a lower priority until more basic knowledge is accumulated.

Questions include the following:

- What skills or abilities are necessary to integrate multimedia information and conventional text?
- What is the overlap between the skills and abilities necessary to comprehend conventional text and the skills and abilities needed to comprehend and integrate multimedia information?

- Under what conditions does multimedia information enhance or interfere with comprehension of conventional print?

We have presented here nine components that we argue define the cognitive representations and processes involved in reading comprehension. Because individual or group differences in any of these components would be hypothesized to relate to differences in reading outcomes, understanding these components and their interrelationships better is an important target of research. Nonetheless, we do not propose that this list of components by itself defines reading comprehension, nor that research on them would constitute a complete agenda for understanding comprehension.

Outcomes

The second dimension that defines reading comprehension is the potential outcomes of the act of comprehension. We have defined three major classes of outcomes, with examples under each of specific operations in which readers might engage. The relevance of these specific tasks to an assessment agenda is discussed later in this chapter.

Knowledge. Successfully comprehending a text involves understanding the content of what is read, integrating new with already stored information, and critically evaluating the information presented. Good comprehenders evaluate what they learn while reading, and develop new knowledge structures as a consequence of reading. People often think of this as getting the point while also reading between the lines. Specific operations that reflect gaining knowledge include the following:

- Getting the gist
- Recalling what was read
- Gaining content knowledge
- Drawing appropriate inferences
- Learning new vocabulary items
- Evaluating the relation of new to previous knowledge
- Changing beliefs based on new knowledge

Application. Content becomes useful when it can be applied to practical problems and tasks, such as programming a VCR or baking a soufflé, or to intellectual tasks such as figuring out a writer's political stance or analyzing an argument. Good comprehenders apply what they have understood from reading both in day-to-day functioning and in learning about new topics. An aspect of using knowledge effectively is judging its importance and relevance to one's tasks. Specific operations include the following:

- Using newly acquired knowledge in further comprehension
- Performing a task
- Solving a problem
- Building connections
- Evaluating utility of knowledge

Engagement. Good comprehension is characterized by deep concentration and becoming absorbed in reading. In other words, good comprehenders are often involved with the ideas, the emotional experiences, and the style of text. They read purposefully, for both affective and intellectual goals. They have confidence in their ability to understand what they read. They also evaluate the quality of the texts they read and determine the relevance of those texts to their own lives. Operations that reflect engagement include the following:

- Reacting aesthetically
- Monitoring topic interest
- Showing motivation and efficacy
- Evaluating critically

Reader Differences

While the two dimensions of components and outcomes might be sufficient to define reading comprehension from the perspective of a single reader, they clearly fall short in defining reading comprehension as a field of study. A third dimension is needed to represent the sources of variation in the way reading comprehension occurs. Indeed, we think of reading comprehension as a triangle with each edge representing one of the dimensions, and each defining a set of factors that should be incorporated into any research agenda. Therefore, in the impending revision, sections will be added on variability in comprehension related to text, task, and context.

Thus, we incorporate into our definition of reading comprehension as a field of study the dimension of reader differences, that is, sources of variation in the functioning of the various processes in service of the various outcomes. We include reader difference in our definition in part because some of these sources of difference (e.g., the developmental differences associated with age and instructional history, or the intraindividual differences associated with text and task) alter the ways in which the components work in comprehension, and affect reading outcomes. Reader differences are an important source of variance in outcomes that can help us understand what factors influence comprehension.

We include other dimensions, such as cultural, language, and social differences, both because they address the overarching issues which motivate this agenda and because discovering such differences might well cast light on our basic understanding of reading comprehension. Most important, we include the dimension of differences to emphasize the dynamic nature of reading comprehension, its susceptibility to influence from a wide array of intra- and inter-individual as well as group factors.

Intraindividual differences. By intraindividual differences, we mean differences in the reading performance of a single reader that emerge as a function of interest, situation, motivation, or other factors. Every student has a particular profile of reading competencies and interests. These intraindividual differences are not well represented in current measures of reading comprehension and are seldom used productively in instruction.

Questions include the following:

- What are the patterns of intraindividual differences in competence that appear among students at different ages?
- How can teachers take advantage of special student reading expertise and motivation to increase the effectiveness of classroom instruction?
- How would we design assessments that better reflect students' reading competencies, by identifying the extent and patterns of intraindividual differences?

Interindividual differences. Individual children and adults vary in their reading comprehension abilities. Some of this variability, no doubt, reflects the assessment procedures used to measure reading comprehension. In addition, though, learner characteristics may partially account for these differences. Thus, differential development of a variety of capacities prerequisite to reading comprehension, such as nonlinguistic abilities and processes (e.g., attention, visualization,

drawing inferences, reasoning), can generate varying outcomes.

Questions include the following:

- What is the evidence that specific components such as those listed above account for interindividual differences in reading comprehension?
- Are specific skills, abilities, and knowledge such as those listed above differentially weighted as determinants of interindividual differences in reading comprehension?
- Are there developmental differences in the contribution made by reading-related skills, abilities, and knowledge in accounting for interindividual differences in reading comprehension?
- To what extent do affective and motivational variables mediate the contribution made by nonaffective/nonmotivational variables in accounting for interindividual differences in reading comprehension?

Social class differences. Social class refers to the status individuals are accorded in a society. This status is a function of race, gender, ethnicity, language, and economic conditions. Research has demonstrated consistent effects of social class on reading achievement. For example, low SES schools generally produce lower reading achievement than high SES schools. What is needed is a more complete exploration of the full range of socioeconomic effects and their relationships to reading comprehension.

In our discussion of social class differences, we recognize that the language we used may be interpreted by some to mean that attributions are made to individuals, for which they are not responsible. We will be certain to clarify that social class status is, in fact, influenced by perceptions of and opportunities afforded people based on race, gender, ethnicity, language, and economic conditions.

Questions include the following:

- How do the various social class characteristics of readers affect their reading comprehension?
- Are there specific comprehension processes that vary with readers' social class characteristics?
- How do social class characteristics of readers interact with other individual differences?

Cultural differences. All cultures—historically evolved beliefs, values, and ways of organizing the tasks of life—teach people about what is worth working for, how to succeed, and who will fall short. Cultures offer a wealth of positions that readers can inhabit. Researchers working within a sociocultural framework recognize the possibility that youth who are routinely described as resistant readers may actually be readers who use alternative literacy practices, such as transcribing hip-hop performances or composing love letters, to express themselves and to make meaning of texts that are essential to their lives. A productive research focus would highlight situational contexts promoting success at various sorts of literacy tasks.

Questions include the following:

- In what way do readers' cultural expectations influence their comprehension processes?
- How do different sociocultural groups differ in their definitions of successful reading comprehension, and in the tasks they would value as operationalizing successful reading comprehension?

- What are the effects of cultural differences on reading comprehension?

Language differences. Readers differ in how they use language to communicate, in the forms of language that they speak, and in the number of languages that they know. Differences in communication practices and in language or language variety spoken have major implications for children's reading comprehension development, especially when teachers do not acknowledge or understand the different ways in which children communicate and the various languages that they know.

Questions include the following:

- How do differences in oral language proficiency (vocabulary, syntax, knowledge of rhetorical structures) affect the reading comprehension of children at different ages?
- What is the role of English oral language proficiency versus first language literacy in reading comprehension for second language or bilingual students?
- How does language variation affect students' reading comprehension?

Developmental differences. The general goal of developmental research is to investigate particular psychological constructs (e.g., reading comprehension) in terms of their basic components, the age of first appearance of each component, the course of development toward automaticity of each component, the integration of components with each other, the degree of independence among the components, and the change of conditions with age that enable the components to function together. Although developmental differences are related to child age, they are also crucially influenced by amount and quality of instruction.

Questions include the following:

- When does each reading comprehension component first appear chronologically?
- As age increases, does a given component become automated, thus permitting other components to appear?
- When and how does each component become integrated with other components?
- To what extent are changes across time in the major construct (or its components) qualitative or quantitative?

Figure 2 summarizes the model of reading comprehension we believe helps organize the issues and the agenda for future research (see page 94). Comprehension is viewed as having several components that together produce beneficial outcomes, with sources of reader differences that are partly explained by sociocultural context. This model suggests that research on comprehension specify the component processes being used, the comprehension outcomes being elicited, and how the various sources of reader differences are being acknowledged.

As many readers noted, thus far, we failed to represent adequately the dynamic nature of the interplay among the components readers bring to the task of reading comprehension or the dynamic interaction among the dimensions we identified. In a revision, we will make clearer the need to think of reading comprehension as a process that can only be studied by recognizing the connections among reader capacities, task or purpose for reading, text being read, and the context in which the reading is occurring. Thus, reader knowledge of vocabulary or of real-world domains, for example, only plays itself out as a factor in reading comprehension

in interaction with the demands made by the text being read. Similarly, reader motivation is not an endemic characteristic, but a dynamic factor that plays itself out in interaction with particular tasks for reading or particular texts.

The Research Agenda: Implications of This Model of Reading Comprehension

In this section of our report, we formulate the most important issues to be addressed within the field of reading comprehension, based on the model of reading comprehension presented above. The summary of our state of knowledge about each of the dimensions in the model, presented above, included questions about those specific topics, which of course should find their place in a larger research agenda. In addition, though, many questions about the important topics of assessment, instruction, sources of poor reading comprehension, teacher preparation, and institutional structures and policies cut across the three dimensions in our model of reading comprehension. We acknowledge that our use of the term "model" to represent what we were trying to formulate was misleading—we did not intend to present a model of reading comprehension itself, but rather a map of available research on reading comprehension, which could help us specify what we know (quite a lot) and what we need to know (even more).

In the final section of the document, we discuss strategies in setting priorities. Under this topic, we include prerequisites to establishing a research program that would carry out the agenda, issues of infrastructure and methods, as well as the thinking behind our own identification and classification of priorities.

Assessment

Currently, comprehension assessments are heavily focused on only a few tasks: reading for immediate recall, reading for gist, and reading to infer or disambiguate word meaning. Assessment procedures to evaluate learners' capacities to modify old or build new knowledge structures, to use information acquired while reading in the interest of problem solving, to evaluate texts on particular criteria, or to become absorbed in reading and develop affective or aesthetic responses to text have occasionally been developed in the pursuit of particular research programs, but have not influenced standard assessment practices. We know that assessments, in particular high-stakes assessments, influence instruction. Thus the absence of these tasks in widely used reading assessments diminishes emphasis on them in instructional practices as well.

We argue that a system of reading assessment should reflect the full array of important reading comprehension consequences, and that a research program to establish expectable levels of performance for children of different ages and grades on this full array of outcomes is necessary. Such a program is prerequisite to developing criteria for performance at different age and grade levels, and to pursuing questions about reader differences associated with instructional histories, social class, language, or culture in reading comprehension outcomes.

A sample of issues that would certainly arise in the process of developing a comprehensive assessment system for reading comprehension would include the following:

- The impact of various response formats on performance
- Variation in performance across text types
- The impact of nonprint information

- The impact of various sorts of formats and accommodations on the test performance of learners of English as a second language
- Variation in performance across a variety of discourse types and genres, including hypertext
- The impact on performance of specifying different purposes for reading
- The capacity to differentiate domain-specific and reading-general components
- The need to reflect performance on literacy tasks typical of electronic reading, such as retrieval
- The capacity to explore some of the components that go outside the traditional rubric of comprehension (such as scanning, intertextuality, domain-specific strategies, and consulting illustrations)

The Development of Automated Reading Assessment Systems

We see the development of an assessment system for reading comprehension as having a very high priority. We recognize that developing a comprehensive assessment system is a long-term project. A crucial piece of such a system is criteria for judging performance across the developmental span. Nonetheless, a substantial start could be made in the short run, either by targeting assessment of outcomes and components as a major task of the research agenda, or by encouraging the development of prototype assessments for outcomes and components within other research efforts (such as research focused on instructional efficacy). Such an effort would be central to pursuing larger research agendas, for example, longitudinal work to create a picture of the development of reading comprehension, a large-scale effort to determine how U.S. children are functioning as readers, or a systematic pursuit of differences in reading comprehension performance related to culture, social class, language status.

Instruction

There is an important distinction to be made between curriculum and instructional practice. Curriculum addresses the question, "What is worth knowing?" What topics should be addressed in comprehension instruction? The model proposed here, for example, might suggest a curriculum focused, in part, on vocabulary, world knowledge, linguistic and discourse knowledge, or an emphasis on different outcomes of reading, such as reading for the gist or to gain content knowledge. Instructional practices, on the other hand, refer to what teachers say and do to teach these topics. For example, a teacher may wish to teach vocabulary as part of her comprehension curriculum; the curriculum is vocabulary and the instructional practice is what the teacher says and does to teach vocabulary. In addition, a teacher may wish to teach fluency by modeling with a picture book how good readers read with expression. Here the curriculum is fluency and the instructional practice is the teacher reading a picture book aloud in an expressive manner.

In the sections that follow, we first identify overarching questions that have high priority, then we list examples of more specific research questions.

Comprehension Instruction

There is a body of knowledge about instructional practice that promotes reading comprehension and student engagement. For example, research shows that instruction in summariz-

ing text, explaining text, and asking questions increases students' comprehension of text. Researchers have also developed specific instructional programs that have been shown to be effective in promoting reading comprehension. However, there are many activities and practices currently being used that have not been empirically substantiated.

Overarching Question: What does good comprehension instruction look like at different ages and reading levels in terms of activities and practices?

- What is the effect of mandated frameworks on effective reading comprehension instruction?
- What are the effects of different types of materials and formats on comprehension instruction?
- What are the elements of vocabulary instruction that make a difference in students' comprehension?
- What is the effect of writing on reading comprehension?

Content Area Instruction

The amount and difficulty of expository or nonfiction text that students are expected to read and comprehend increases dramatically at the end of the primary grades. Reading assignments are given in social studies, science, and mathematics texts, often with the expectation that students will know how to comprehend the dense text of content area materials without specific instruction in how to do so. Not all students who successfully read narrative text cope successfully with this transition.

Overarching Question: How can students' comprehension of content area materials be improved at elementary, middle, and high school levels, and how does good comprehension instruction at these levels differ for the various content area domains?

- What does comprehension instruction look like when students are taught to use the text in domain-specific ways (e.g., to use science texts to support scientific inquiry, or to take a historiographer's approach to historical materials)?
- What features of classroom instruction, including writing, peer discussion, multimedia, and interest-based text, make content area reading and materials more relevant to students?

Instructional Responses to Diversity

Many of the curriculum questions previously raised also may be applicable to the reading comprehension instruction of students from diverse linguistic and cultural backgrounds. However, there are specific instructional questions that need to be addressed. The reading performance data for students from diverse linguistic and cultural backgrounds illustrate the need to focus on these students' reading comprehension.

Overarching Question: What specific instructional activities, materials, and practices are related to effective comprehension and engagement of students from various cultural and linguistic backgrounds?

- How can school-initiated experiences, related to the enhancement of students' world knowledge, lead to improvements in reading comprehension?
- What is the effect of using students' cultural, home, and community knowledge on their reading comprehension?

- What type of comprehension instruction is needed in the first and second languages for bilingual students?
- What instructional activities and practices promote comprehension for speakers of nonstandard dialects?
- How can changes in curriculum and practice address gaps in reading comprehension among diverse groups?

Domain specificity in reading comprehension (and reading comprehension instruction) is a topic of enormous practical importance and theoretical interest, and one that we failed to attend to sufficiently in this first draft. It will receive more systematic attention in the revision. A particular example of domain-specific reading (e.g., math reading) might usefully be worked out as an example of what a specific research undertaking should look like.

Sources of Poor Reading Comprehension

With adequate instruction, most children will experience success, and problems with reading comprehension will be prevented. However, given the evidence for intraindividual and interindividual variation in learner characteristics and the broad range of environments in which children develop, it is not surprising that some children do not acquire adequate reading comprehension skills. It is important to recognize that the sources of poor reading comprehension cut across ethnic, sociocultural, and organizational levels of analysis.

Learner characteristics. How do learner characteristics influence students' levels of reading comprehension?

- oral language characteristics (e.g., phonology, morphology, syntax, vocabulary)
- awareness of language structures (e.g., syntactic awareness, pragmatic awareness, concept of word as a unit of form, sensitivity to word meanings, awareness of discourse patterns)
- nonlinguistic abilities and processes (e.g., attention, visualization, inferencing, reasoning)
- affective and motivational factors
- social, cultural, and home background

What types of compensatory strategies do poor comprehenders use that affect reading comprehension positively or negatively?

Social, interpersonal, and interactional variables. What is the effect of the social climate and patterns of interaction in and out of classrooms on the reading comprehension of struggling readers? (How does the social organization of the classroom, such as group size and established interaction patterns, influence struggling readers' willingness to engage in learning from subject matter texts?)

Instructional variables. What are the school level variables, policies, and instructional practices and programs (regular, compensatory, and supplementary) that have an impact on the reading of poor comprehenders?

What are the effects of classification practices and special educational programming on the development of functional literacy and reading comprehension skills?

Are the instructional practices that appear to be effective for native English speakers also effective for children from more diverse linguistic and cultural backgrounds?

To what extent are teachers able to individualize instruction effectively to meet the needs of individual students, especially poor comprehenders?

Text characteristics. How is the reading comprehension ability of poor comprehenders affected by the nature of the texts they are asked to read? In particular, what are the effects of genre (including electronic, hypertext, multimedia), diversity of texts, difficulty levels, predictability, decodability, and vocabulary?

How is the reading comprehension ability of students affected by the nature of the texts they listen to? In particular, what are the effects of genre, difficulty level, vocabulary diversity, and discourse structure?

Teacher Education, Professional Growth, and Institutional Structures and Policies

Teachers who have more professional education (preservice and inservice) are more likely to use teaching practices that are associated with higher reading achievement. Teachers need a strong understanding of theory and research about reading comprehension on which to base instructional decisions, and they need familiarity with ways to embed reading comprehension instruction into a broad array of activities. They need to know how to select specific instructional practices in a fashion that is sensitive to student needs and appropriate to the affordances of the materials available.

Effecting change in instruction also presupposes knowing a good deal about the organization of schools, educational policy, and the impact of assessment on curriculum and instruction. We need more understanding of the links between teacher education and practice, and how the links might lead to greater student comprehension in reading. More specifically, the following questions need to be addressed:

Overarching Question: What are effective ways of bringing about changes in policy and educational practice to promote improved comprehension?

- What should be the content of preservice instruction for teaching reading comprehension?
- What are the effects of different types of practical experiences on preservice teachers' comprehension instruction?
- How do standards for teaching, performance assessments, and incentives affect teacher practice and lead to improved student comprehension?
- What are the school-level variables, policies, and instructional programs (regular, compensatory, and supplementary) that affect students' reading comprehension?
- What types of professional development for inservice teachers lead to improved reading comprehension instruction?

Our first draft gave insufficient attention to the need to incorporate perspectives derived from practice—the reflections of wise and experienced practitioners who have accumulated craft-based knowledge about instructional strategies that work, how to identify students in need of special attention, approaches for use with second-language learners, and so forth. We were not unaware of this rich resource, but we did not think sufficiently about how it might be accessed in formulating and carrying out a research agenda. We hope in the next draft to do better.

Strategies for Developing a Research Program on Reading Comprehension

This report was designed explicitly to serve as a foundation for conversation and consultation with the field of reading researchers in order to generate a broad base of input to any OERI-funded research effort. It is clearly premature to specify a list of research questions or to rank order research topics based on the thinking behind this document. Nonetheless, the RRSG recommends that some large-scale, basic descriptive research efforts be considered.

We recognize, as well, that defining issues of intellectual challenge and practical importance is only one task in trying to formulate a research program. In this section of the report, then, we consider some additional prerequisites, issues of infrastructure and methodology that have to be addressed, further considerations on the basis for priority setting, and the next steps that need to be undertaken.

Prerequisites to Establishing a Research Program

OERI's goal is to present a research program that instantiates high quality and displays high utility. If OERI is to meet this goal, it must first (together with other representatives of the education research community) address widespread doubts concerning the quality and relevance of educational research, and address specific complaints concerning the credibility of OERI's research initiation and management efforts.

Of course, educational research is not all bad, nor is medical research, with which it is often perniciously compared, all good. In any case, given its limited funding, OERI has little influence over the vast majority of educational research. The task for OERI is to select and support very high quality efforts within educational research, and to demonstrate not just the intellectual credibility but also the practical utility of that research. We suggest that at least three steps be taken in the field of reading research to promote that effort:

1. Develop a community of researchers.
2. Develop a community of researchers and practitioners.
3. Develop the infrastructure needed to select and manage the research.

Methods Appropriate to the Task: Research Methodologies

The RRSG considered at length the issue of methodologies necessary to address the research questions identified by the committee. There was consensus among the committee that a range of methodologies not only was necessary, but also was essential to ensuring rigorous evaluation of the various research questions. A particular research study may involve a combination of different types of approaches and different types of data requiring the need to adhere to multiple evidentiary standards. In the interest of rigor, it is imperative that the methodology selected to address a research question be driven by the question itself and not by arbitrary judgments that some methods are stronger than others.

It is to be hoped that one aspect of this research agenda will be to increase the receptivity of educational thinking to the value of rigorous research, and to stimulate active discussion of research methods and their appropriate application. A program of research, especially one structured across several years, is ideally characterized by procedures to guide selection of questions through a process of

setting research priorities, as well as to ensure replication of findings, deepening of understandings, charting of progress, and assessment of the degree of convergence across studies and research methods. The research program proposed here on reading comprehension should be a model for the effective choice and use of appropriate and diverse methods.

Procedures for Establishing Research Priorities

The RRSG did not attempt, within the constraints of its limited time, to take on the challenge of establishing a prioritized list of research undertakings. Rather, we considered our role one of defining a general area of research, and sketching within that area some of the parameters that might help determine a specified research agenda in the future. Furthermore, it is clear that the specifics of that agenda should be informed by comments and reactions from a group much larger and more broadly representative than the one that drafted this report.

The research topics (status of the components, outcomes, and learner differences) were judged on the following criteria:

- The richness of the knowledge base in its current state
- The importance of expanding the knowledge base
- The importance of exploring instructional applications

The research questions presented in the second half of this document, on the other hand, were judged based on

- The richness of the knowledge base
- The extent to which relevant applications were already deployed

Next Steps: Plans for Revision

We sketched a new outline for the revised report when we met in March 2001. It will have the following structure:

Introduction. The introduction to the document will include the motivation for undertaking this task already formulated, but will make clear that what we offer is a framework for situating research within three major domains or research areas: what reading comprehension is, why reading comprehension outcomes vary, and how to improve reading comprehension.

A framework for research on defining what reading comprehension is and what constitutes proficient reading at different ages or levels of experience. Previous work in this domain has identified four dimensions that define it: reader, text, task, and context. Our previous draft defined a list of components, which will now get subsumed under the category "reader," as variables defining the capacities readers bring to the task of reading. It will be made clear that these variables operate interactively. Our previous draft presented a dimension we called "outcomes," which will be redefined as "task variables." We will need to add a section on text variables, incorporating the material we included under the category of domain-specific reading. We need to expand and specify considerably our discussion of context. And we need to emphasize that the relations among these four dimensions of the problem-space are dynamic—that the action is at the interface among the four dimensions, not on any single one of them.

A framework for research on variability in reading comprehension. In our previous draft

we discussed variability under the heading "reader differences." Much of that material can be recycled under this new heading, though many felt we should highlight intra- and interindividual differences more. Because we want to maintain the four-dimensional scheme as an organizing principle, though, we will add sections on variability in comprehension related to text, task, and context.

A framework for research on improving reading comprehension for all children, but especially for poor comprehenders. We propose to discuss three major issues associated with the task of improving outcomes: assessment, teacher preparation, and instruction. These will all be discussed as they relate to the four dimensions of reader, text, task, and context. For example, an assessment agenda needs to address issues such as how to assess readers' capacities, text appropriateness and quality, performance on various tasks, and the situation of learning. A teacher preparation agenda might focus in part on what teachers need to know about readers, text, tasks, and context, and in turn would generate research to build out the knowledge base in these areas. An instructional agenda would include attention to adapting instruction to reader characteristics, focusing on the demands of different text types, instruction that addresses the various tasks, and building contextual supports into instruction. This section will need considerable new work, though the many questions formulated in the first draft, as represented in this chapter, reflect a systematic process of inventorying what we felt is known about these domains.

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CHAPTER 7

Toward an Understanding of the Development of Reading Comprehension Instruction Across the Grade Levels

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THIS CHAPTER examines some definitional possibilities for the terms *reading comprehension*, *development*, and *instructional interventions*. Anders addresses head-on the disagreements in the field regarding the definitions of these terms. She argues that linear definitions of comprehension are incorrect. Rather, comprehension is a multifaceted process that involves readers' cognitive, social, and linguistic experiences both historically and currently. She believes that those professionals who provide comprehension instruction need to acknowledge the problem-solving nature of the process and provide opportunities for students to actively engage. Finally, Anders argues that changes and improvements in comprehension instruction will take place through teacher education that involves teachers in the processes and activities that research suggests are important for comprehension to occur. This chapter is again useful because it directly addresses the conflicts surrounding balance and comprehensiveness. It argues strongly for a less linear and more contextualized understanding of reading and reading instruction.

What can be expected from students with regard to reading comprehension? What is the normal course of comprehension development? How do curricular expectations change across the grade levels? What is known about the efficacy of various interventions? How can teachers shape instruction to take advantage of knowledge about normal comprehension development and the efficacy of various interventions? These are the questions that guided the writing of this chapter. Good information exists to address these questions; from what we know, we can deduce implications for practice and for further research.

To begin, this chapter discusses definitions of the terms *reading comprehension*, *development*, and *instructional interventions*. This discussion raises issues in reading education and provides a basis to address the posed questions.

Definitions

Readers probably assume that these terms are commonly understood among educators. As

Rex, Green, Dixon, and the Santa Barbara Discourse Group (1998) and Anders (1991) point out, however, literacy researchers and educators often mean different things when using terms that are common in the field. For example, the terms *comprehension* and *development* have differing definitions, and ambiguous definitions can result in miscommunication among literacy educators.

Reading Comprehension

Some reading educators assume that reading comprehension is related to readers' answering questions, retelling or summarizing what has been read. Others assume that reading comprehension is accomplished in the service of learning, understanding, remembering, responding, and making inferences. These two assumptions represent a fundamental difference among educators about the definition of reading comprehension.

These different assumptions are reflected in the definitions provided in *The Literacy Dictionary: The Vocabulary of Reading and Writing* (Harris & Hodges, 1995). After explaining that Durkin (1993, as cited in Harris & Hodges, 1995) described comprehension as the "essence of reading," (p. 38) the following two definitions are offered:

> (1) The reconstruction of the intended meaning of a communication; accurately understanding what is written or said. Note: The presumption here is that meaning resides in the message awaiting interpretation, and that the message received is congruent with the message sent. (2) The construction of the meaning of a written or spoken communication through a reciprocal, holistic interchange of ideas between the interpreter and the message in a particular communicative context. (p. 39)

The differing assumptions about the purpose and process of reading comprehension are evident when these two definitions are compared. The former assumes that meaning resides in the message awaiting the reader's replication. The latter assumes that meaning resides in the intentional problem-solving thinking process of the interpreter, that the content of meaning is influenced by that person's prior knowledge and experience, and that the message constructed by the receiver may or may not be congruent with the message sent.

Harris and Hodges (1995) provide two quotes to lend credence to the second definition. They quote Ruddell, Ruddell, & Singer (1994, as cited in Harris & Hodges, 1995), "Comprehension is a process in which the reader constructs meaning (in) interacting with text...through a combination of prior knowledge and previous experiences; information available in text; the stance taken in relationship to the text; and immediate, remembered or anticipated social interactions and communication" (p. 39). Also, they quote Anderson (1993, as cited in Harris & Hodges, 1995): "The meanings of words cannot be 'added up' to give the meaning of the whole. The click of comprehension occurs only when the reader evolves a schema that explains the whole message" (p. 39).

These assumptions and their related definitions are exemplified in the literature. For example, the authors of the *Report of the National Reading Panel* (NICHD, 2000) first quote part of the second definition provided by Harris and Hodges (1995), but the authors change the definition to be "readers derive meaning from text when they engage in intentional, problem-solving thinking processes" (p. 14). This restatement turns the word *constructed* into *derived*. This is theoretically contradictory and exemplifies the conflict over definitions.

"Constructing meaning" is different than "deriving" or "getting" meaning. The term *constructing* in reading research and practice is rooted in theories that privilege neither the text nor the reader in the reading process, whereas the term *deriving* suggests that the text is the privileged partner in the reading process. These are two distinctive ways of thinking about the reading process (e.g., paradigm shifts, Kuhn, [1970]), which affect related research and practice. This is demonstrated by the panel's decision to define comprehension as "deriving" meaning. Their task was to describe replicable research-based studies—and, for reasons of design constraints, few controlled, hypothesis-testing, inferential studies exist that define comprehension as constructed.

Those words, *constructing* and *deriving*, are pivotal to an understanding of reading comprehension. The NRP authors might think this is nit picking—after all, they included "intentional problem solving" and "thinking" in their definition. True, but the term *deriving* shifts the intentional problem-solving behavior toward discovering the author's intent rather than toward the reader's purpose. This is the contested point about reading comprehension. It is the point at which beliefs, instructional practices, and research methodologies diverge.

A second source for thinking through the definition of reading comprehension is the RAND report (2001), commissioned by the Office of Educational Research and Improvement (OERI).[1] This study group's assignment is to articulate an agenda for reading comprehension research. As this chapter is being written, the RAND study group is in the process of writing their report, and they have uploaded their progress to the Internet to solicit input from other educators. Hence, the report is for "discussion purposes," which is how it is used here (see also chapter 6, this volume, for more discussion of the RAND study). The discussion among educators about reading comprehension reveals the contrast in definitions about reading comprehension. For example, in comparison to the NRP report, the RAND group's definition of reading comprehension is complicated. They write,

> We define reading comprehension as the process of constructing meaning through interaction and involvement with written language. The reading comprehension process includes three dimensions: the cognitive components involved, the outcomes, and reader differences. These three dimensions define a phenomenon that occurs within a larger sociocultural context, which shapes and is shaped by the reader, and which comes into contact with each of the dimensions, influencing knowledge, processing, purposes, outcomes, and the nature of reader differences. The sociocultural context affects student's acquisition of the reading components, their demonstration of outcomes, and often is a source of individual and group reading differences. It mediates students' experiences, just as students' experiences influence the context. (lines 224–233, p. 8)

The components of the above definition include the following: vocabulary, world knowledge, purposes and goals, cognitive and metacognitive strategies, linguistic knowledge, discourse knowledge, fluency, and the integration of nonprint information with text. They suggest three potential outcomes of comprehension: knowledge, application, and engagement. Those who comprehend well are described using strategies in reading to learn new concepts, get deeply involved, critically evaluate what they read, and apply their new knowledge to solve practical

1. The revised report has been published: RAND Reading Study Group. (2002). *Reading for understanding: Toward an R&D program in reading comprehension*. Santa Monica, CA: RAND. The full report is also posted on the RAND website, http://www.rand.org/multi/achievementforall.

and intellectual problems. The incorporation of outcomes into the proposed model is reminiscent of Jenkins's (1979) suggestion that multiple lenses be used to define and study reading comprehension.

Multiple lenses regarding a definition of reading comprehension are available in the chapters dedicated to comprehension, learning, and responding in the *Handbook of Reading Research* (Kamil, Mosenthal, Pearson, & Barr, 2000). Pressley (2000) addresses the question "What should comprehension instruction be the instruction of?" His definition of comprehension is reminiscent of the "deriving" definition; that is, he writes, "Children are taught to read so that they can understand what is in text" (p. 545). Without expanding on what is meant by *understanding*, the reader is left wondering whether Pressley means, *deriving* or *constructing*. Lacking such expansion, and given the wording of the definition, readers might conclude that he means that readers need instruction to derive meaning from the text.

In contrast, Alexander and Jetton (2000) begin their chapter on learning from text by suggesting "a multidimensional and developmental perspective" (p. 285). Following in the footsteps of Jenkins (1979), they describe those multidimensional perspectives as being the context, the reader, and the text. In the foreground of their discussion is consideration of how learning (i.e., we need to comprehend to learn) is related to the shifting needs of schooling in a postindustrial democratic society. The purposes for learning, they point out, are different when learners are bombarded with information; Alexander and Jetton contend that readers need to be able to sort among various sources of information for the relevant, credible, and meaningful. Learners also need to develop "principled understanding" (p. 287) by studying and learning relevant information in depth by using multiple sources. And they further argue that the sociocultural nature of learning is evident in the postindustrial society. Alexander and Jetton emphasize that readers' goals and interests are driving forces in text-based learning and that texts take many forms to represent knowledge, which is made available to readers through the strategies they use. Alexander and Jetton are cognitive psychologists; hence, the principles and ideas about which they write reflect a cognitive psychology perspective. Their perspective addresses issues of learning that are compatible with a definition of comprehension that is constructivist.

The contrast portrayed by the Pressley (2000) chapter and the Alexander and Jetton (2000) chapter is marked. The former is simple; the latter is complex. One represents comprehension as a process incidental to learning. The latter represents comprehension as a tool for learning: The information or experience comprehended today is used tomorrow for learning new information or for understanding a subsequent experience.

Another intellectual tradition that is related to comprehension is that of reader response. Marshall (2000) claims that reader response is wedded to reading, understanding, or responding to literary texts. And although Marshall claims that comprehension is the "ability to say back what happened" (p. 382), reader response could or should be a synonym for comprehension. Rosenblatt (1938), one reader-response theorist whose work is foundational to the field, theorizes that the readers' stance (an aesthetic or efferent purpose) influences comprehension.

Beach, a reader-response researcher who incorporates activity theory in his work, describes the shortcomings of both the cognitive and the reader response perspectives:

> Much of reading research and education focuses on attaining, acquiring, and extracting predetermined "official" meanings sanctioned by test makers, teachers, or other powers-that-be. At the same time, traditional reader response theory posits that the meaning is in the "individual reader," which fails to consider the influences of social and cultural contexts constituting and shaping readers' stances and text positioning. . . . [Reading educators need to consider] how purposes and goals operating in contexts shape how readers understand texts. This involves examining how readers contextualize texts in terms of why they are reading those texts. Drawing on activity theory of learning, we need to ask how participating in "activity systems" driven by certain motives or objects shape readers' responses. The primary unit of analysis is not simply the text or the reader; it is the activity or activity system constituted by objects, tools, agents, rules, community, and roles. (R. Beach, personal communication, March 15, 2001)

This discussion of varying definitions of reading comprehension portrays the crux of the issue: Where does meaning lie? Does it lie in "getting" or "deriving" the meaning from the text? Does it lie in the reader constructing a meaning?

However one answers these questions, it is apparent that the act of comprehending cannot be separated from the purposes for which reading is accomplished and that the resulting comprehension (the outcome) is related to those purposes. Outcomes might include assimilating and accommodating previously unknown information into one's schemata, confirming previous knowledge or experience, having an aesthetic experience, or being able to do something that could not be done without instruction provided by the text.

Each of the comprehension definitions, whether it be deriving meaning or constructing meaning, portrays reading comprehension as an "intentional, problem-solving thinking process." This suggests that we reading educators would be informed by research related to the development of readers' intentions: How do children and youth make plans to fulfill their intentions for reading? And what is known about problem-solving behavior? How do children and youth engage in problem-solving behavior when reading? Literature that addresses these questions is discussed in the section that follows.

Developmental Considerations

What is meant by development? To address this question, we first look at an issue in the definition of development—the use of ages and grade levels to describe reading comprehension development. Then we turn to different perspectives of development. One of the perspectives we pay particular attention to is that of psychologists who study the development of problem solving and intentional actions. This literature is used to better understand the development of reading comprehension.

Why do educators emphasize grade levels when they discuss developmental progress in reading? What do we mean when we say that a student reads at a particular grade level? One problem with using grade levels as developmental guideposts is that the age of the learner is confounded with the reading process. For example, if an adult is a nonreader, does that mean that when learning to read, he or she needs to develop the same skills and strategies in the same way as a kindergarten or first-grade student? Most educators would believe that to be unreasonable. Or, consider what happens when a very skilled reader is faced with reading something that is written in an unusual style or is about a topic that the reader knows little about. Most such readers would attempt a variety of strategies, many of which are used by less developmentally

advanced readers, such as reading aloud, going to the dictionary, and talking with someone who has expertise on the topic. What is needed is a description, without ages and grades, to help teachers ascertain what students know and what they might need to be taught next.

One reading educator who has attempted to describe the development of reading comprehension is Chall (1983). Her ambitious attempt is an age-related stage theory, although she emphasizes that the age-related stages should only be thought of as estimates. She points out that we know little about the adult reader who is just beginning, but she claims that any reader would need to "go through" the stages she describes (see Figure 1).

If the development of reading comprehension is the acquisition of reading comprehension strategies, as Chall (1983) suggests, several sources of evidence suggest that students are capable of learning the comprehension strategies that appear to be useful for reading comprehension. For example, the National Reading Panel (2000) reports that 76% of strategy research has been carried out with students in grades 3 through 6. Duke and Pearson (2002) agree that although the development of reading comprehension, especially for struggling readers, has not been addressed, sufficient research suggests that most students are capable of using most reading comprehension strategies in elementary school. Also, a summary of the strategies researched by grade level (Robinson, Faraone, Hittleman, & Unruh, 1990) reveals a trajectory of strategy instruction, with the largest quantity of studies reported in grades 4, 5, and 6.

FIGURE 1
Stages of Reading Development

Stages	Description
Stage O. Prereading: Birth to age 6	Children learn alphabet, write their names, and discriminate between letters and sounds. Problem-solving strategies begin.
Stage 1. Initial reading, or decoding, stage: Grades 1–2, Ages 6–7	Children continue to develop rules for letter and sound correspondences.
Stage 2. Confirmation, fluency, ungluing from print: Grades 2–3, Ages 7–8	Reader becoming fluent, not reading for new information, but reading to confirm what is already known.
Stage 3. Reading for learning the new: A first step: Grades 4–8, Ages 9–13	Reading stories and informational text about what is already known, or reading simple text with only one perspective and limited technical complexities.
Stage 4. Multiple viewpoints: Grades: High school, Ages 14–17	Reading increasingly abstract and complex materials; critical reading ability develops; multiple perspectives are increasingly understood.
Stage 5. Construction and reconstruction—A world view: Grades: College, age 18 and above.	Continued development of high school abilities.

These examples of strategy research at different grade levels do not provide a sufficient explanation of comprehension development. About all that can be concluded from these studies is that most students are capable of learning to use strategies and that students who employ particular comprehension strategies are usually better comprehenders, as measured by the researchers, than those students who do not employ the strategies. To understand or explain the development of comprehension, information is needed about how comprehension changes over time (Miller, 1993). Comprehension is not a coldly cognitive phenomenon, but encompasses motivational dimensions and is reflective of the social and cultural environment (Brown, Bransford, Ferrara, & Campione, 1983; Pintrich & Schrauben, 1992). What is needed, then, is an understanding of the relationship of particular strategies to context, purpose, and expected outcomes over time.

If this conclusion is acceptable, the shortcomings of Chall's (1983) "Stages of Reading Development" become clear. It lacks a multifaceted perspective of reading comprehension. Further, although teachers' experience and research (Eeds & Wells, 1989) suggests that children are capable of critically analyzing fiction and nonfiction literature, critical response/comprehension is not included in Chall's stages until high school and post-high school. Thus, Chall's placement of the development of critical thought in the high school and post-high school stages do not ring true. These limitations suggest that alternative explanations are needed to understand the development of reading comprehension.

A viable alternative explanation is to consider the literature on planning and problem solving. In the 1980s two ideas had a profound impact on my own thinking about reading comprehension. One was Bruce's (1980) chapter on the importance of social planning and the development of reading comprehension, and the second was an observation that Heath (1988) made during a presentation. Heath spoke about the research that resulted in her seminal book, *Ways With Words: Language, Life, and Work in Communities and Classrooms* (1983), and she commented that one of the common threads she found among children and youth who were capable comprehenders was their involvement with others in the making of plans: Successful language comprehension seemed to be related to making plans with others.

These insights, by Bruce (1980) and Heath (1988), signal a shift in research attention from an emphasis on attempting to describe individual cognition to studying the social construction of understanding. This shift is not minor; it is a revolution (Gauvain, 2001). Gauvain claims, "Perspectives that concentrate on internal processes of cognitive development and ignore external processes and the interaction of the two are simply unable to provide a complete account of the emergence of human intellect" (pp. xiii–xiv). It is safe to say that most research and practice in reading comprehension focuses on the internal processes of comprehension and little attention is paid to external processes and the interaction between the internal and the external.

Psychologist Robert Siegler (as cited in Gauvain, 2001) concurs, explaining why the autonomous view of learning (e.g., the strategy-centered, individualistic approach to development) is not sufficient:

> To the extent that information-processing approaches have examined learning, they have focused on mechanisms that operate during the course of particular learning episodes. These mechanisms include encoding new features of the task, identifying rules that consistently solve the problems being presented, drawing analogies

> between the new situation and previous ones, choosing among alternative strategies, and so on. Precise assessment of knowledge, both before and after the learning episode, has also been emphasized. On the other hand, information processing analyses have had little to say about how children learn through interactions with their parents and other knowledgeable individuals, how children learn through interactions with peers of roughly equal knowledge, and how the culture within which children develop influences the skills, knowledge, and values that they acquire. In short, information-processing approaches have focused on the internal cognitive processes involved in learning to the exclusion of social processes that are also involved in most learning. (p. x)

These perspectives and the research related to a sociocultural view of learning are being studied by a growing number of researchers (e.g., Bruner, 1986; Friedman, Scholnick, & Cocking, 1987; Galda & Beach, 2001; Moll, 1990; Rogoff, 1990), who ground their investigations and theory-development in the research of Vygotsky (1934/1978) and his colleagues. For example, Bruner (1986) compares the individualistic psychological explanation for comprehending and points out that the perspective is too narrow. The controlled experiments typical of this perspective are not capable of explaining the variance that exists in human response to literature. He writes,

> I have come increasingly to recognize that most learning in most settings is a communal activity, a sharing of the culture. It is not just that the child must make his knowledge his own, but that he must make it his own in a community of those who share his sense of belonging to a culture. It is this that leads me to emphasize not only discovery and invention but the importance of negotiating and sharing—in a word, of joint culture creating as an object of schooling and as an appropriate step enroute to becoming a member of the adult society in which one lives out one's life. (p. 127)

Gauvain (2001), whose ideas are theoretically consistent with those above, summarizes investigations related to problem solving and planning in her book *The Social Context of Cognitive Development*. The entire book is worthwhile to read, but two chapters are critical to the consideration of reading comprehension development: "Solving and Learning to Solve Problems in Social Context" (pp. 102–136) and "Constructing the Future: Planning in Social Context" (pp. 172–207). In these two chapters, Gauvain documents the development of problem solving and planning. She describes studies that investigate the "thesis that experience with others leads to increased skill for children and solving problems" (p. 169). The studies she describes reveal that "social experience can effect the development and use of strategies" (p. 169) and that strategies for problem solving are developed when a knowledgeable and sensitive adult scaffolds the experience for the child. Further, these experiences accumulate for the child so that there is an ever increasing and elaborate strategic and content knowledge base. Thus, one problem-solving experience becomes generalized to subsequent similar problem-solving situations. All this social engagement around problem solving also contributes to the developing sense that a child has of his or her culture. Gauvain writes, "When people solve problems together they convey lots of information in addition to task descriptions procedures, and strategies. They also transmit a set of values about thinking in a particular domain in a particular cultural context" (p. 170).

The chapter on planning also provides several studies that demonstrate the powerful relationship between the making of plans and cognitive development. Children, over the

course of their childhood, benefit cognitively from planning with adults and with peers. Learning to plan takes time and opportunity and is related to corresponding social, emotional, and linguistic skills. In instances where children are not allowed to or encouraged to engage in planning for authentic purposes with others, their cognitive development is different, if not delayed, when compared to those children who have the opportunity to do so.

Language development—the use and manipulation of sign systems to represent meaning—is a related issue. Planning and problem-solving activities take place as language is used and manipulated. As language develops, children are more and more capable of engaging in planning and problem-solving experiences. This is not to say that language comes first and is then used in activity; rather, language is developed as activity occurs. For example, Moll and Diaz (1987) found that bilingual students were capable of thinking about and comprehending a reading passage when they were first able to read the story in their first language. The students could read at grade level when given the opportunity to do so in the language they could control before being confronted with reading in their second language. Further, language researchers conclude that language develops as authentic needs arise in meaningful context. Being involved in problem-solving and planning activities provides that context.

Hence, the development of comprehension is not a matter of simply acquiring the ability to use a set of strategies or skills; rather, comprehension development corresponds with the development of a learner's social relationships as problems are solved and plans are made in conjunction with the use of language in meaningful contexts. Frankly, the field of reading is quite a long way from being able to explain the development of reading comprehension as called for here. There seems, however, no alternative to the integration of these seemingly disparate fields of inquiry toward a true description of and theory of reading comprehension.

Instruction

What is meant by instruction? There are two perspectives on this key word: one is the observable, potentially measurable direct or explicit instruction and the second are teacher's responses to "teachable moments." The former is the instance when the teacher has a particular skill or strategy to impart to the students and the latter is the teacher's presenting of a skill or a strategy when students need it in order to accomplish a particular purpose. The discussion below overviews the literature related to direct or explicit instruction, because that is the information that is available. It may not, however, represent the most valuable type of instruction. It may be that strategic instruction provided on the spot, when students need it, is the more valuable instruction. In all likelihood, teachers need to be able to provide both types of instruction.

The NRP report (NICHD, 2000) defines instruction as explicit strategy instruction—strategies are "procedures that guide students as they attempt to read and write" (p. 4). The researchers identified 16 categories of instructional strategies and concluded that scientific evidence supports the use of the following:

- comprehension monitoring
- cooperative learning
- graphic and semantic organizers, including story maps
- question answering
- question generation
- summarization

They also reported that the literature supports the use of these strategies in combination, in the sense of multiple strategies.

Despite theoretical squabbles about the means of successful strategy instruction, there does seem to be a sense of convergence in the literature regarding instructional strategies that help students to become strategic readers. Duke and Pearson (2002) capture these in a list and describe the sort of instruction that accompanies each strategy. By the way, Duke and Pearson admit that we do not know that every single strategy can be successfully taught and used by all children. They point out, however, that neither do we have evidence to suggest that they are not appropriate.

Predictions. According to Duke and Pearson (2002), the best evidence regarding helping readers to make predictions lies with the reading of narrative texts. They caution that because of readers' misconceptions about content, the making of predictions about expository text may be less successful. Duke and Pearson's concern is well taken, and although this question needs further research, some studies demonstrate that prediction activities do facilitate comprehension of expository text.

For example, Bos and Anders (1992) suggest that prereading activities, which engage students in making predictions about expository text, is helpful for two reasons: (1) the prereading activity provides the teacher with an opportunity to ascertain who has what sorts of misconceptions, so the teacher can then make adjustments in the instruction to help students make mental accommodations to change their schema; and (2) when reading is viewed as a problem-solving activity, readers can read the text to confirm or challenge their previously held conceptions, whether they be invented or conventional. The Bos and Anders investigations, which were conducted with students identified as being learning disabled, learning disabled bilingual, or "normal," used expository texts with students in grades 4/5, 7, and 10. The students participated in strategies identified as interactive, such as semantic mapping and semantic feature analysis, or they were taught using direct instruction strategies, such as locating and memorizing definitions of vocabulary. Both the treatment groups and the comparison groups learned the same words, vocabulary related to the concepts in the text. The distinctive feature of these interactive strategies was that, based on students' prior knowledge, predictions were made about the relationship between and among the conceptual vocabulary of the text to be read. The teacher-researchers encouraged students to make educated guesses and when students disagreed among themselves as to what the relationship might be between terms, those disagreements became purposes for reading. That is, students were to read to confirm or disconfirm their personal predictions and the predictions of their classmates. In all cases, 37 studies in all, the students who were taught using the interactive strategies had significantly better reading comprehension than those who participated in the direct instruction strategies. The strategies described by Duke and Pearson (2002) are similar in that they invite readers to engage in reading by activating their prior knowledge about a story theme, the content, or the structure of a reading, and to make predictions about the content.

Think-alouds. Think-aloud or modeling strategies are helpful to readers who are learning to comprehend because they make explicit what a strategic reader does when reading. The teacher or another capable "other" models and

makes public what is being done to construct meaning of a text. One biology teacher I observed modeled notetaking by using two overheads. One overhead presented the text, the other was blank, and the teacher demonstrated how she would take notes from the chapter. Students then practiced notetaking and the teacher helped them to monitor their progress and success.

Text structure. Substantial evidence suggests that students who comprehend well are able to decipher and describe the structure of the text. Poor comprehenders, especially those in the middle grades, seem to benefit from being instructed in various text structures. Better comprehenders, however, do not necessarily benefit from such instruction, probably because the extra attention being paid to text structure—something they already understand either implicitly or explicitly—draws their attention away from constructing meaning.

Graphic organizers. Maps, charts, flow charts, and other graphic organizers make visual the relationships between and among ideas in the text. These visual representations are metaphors for schema and seem to make the construction of meaning a reality for readers. Graphic organizers are successful prereading activities, particularly when the students are involved in their creation. Research studies that involve students in the activity in only a cursory way have shown to be far less powerful. Likewise, student construction of maps and charts after reading are helpful for comprehension.

Student-written summaries. Experimental studies demonstrate the power of teaching students to write summaries after they have read to help them comprehend. Teachers instruct students in the proper form of a summary and develop rubrics for evaluating the summaries. Some might be concerned that summary writing is a strategy that more closely matches the deriving definition of comprehension than the constructing definition. From the perspective of an inferential research paradigm, however, it is a form of comprehension strategy that is testable.

Questions and questioning. Research on questioning has a long tradition. In the 1960s, researchers categorized questions and encouraged teachers to ask questions representing different types (e.g., Barrett, 1968). In recent years, strategies have been developed and studied that help readers to ask their own questions (e.g., Beck, McKeown, Sandora, & Worthy, 1996; Raphael & Pearson, 1985).

Intentional reflection on success and needs. Those who are learning to comprehend appear to need continual opportunities to reflect on their successes and to make plans for possible improvements. Generally, students begin this metacognitive activity quite easily at around the middle elementary years. Investigations of retrospective miscue analysis (Goodman & Marek, 1998), for example, reveal that readers are capable of analyzing their miscues and discussing and reflecting on their comprehension at this time and throughout the life span.

Instructional plans. Other strategies are not so readily identifiable as a single strategy and are, rather, a combination of strategies. One such instructional plan is reciprocal teaching (Palincsar & Brown, 1984), a reading lesson with several components, which when used in combination appear to be helpful for comprehension at most grade levels. Lloyd and Anders

(1994) also categorized reading comprehension strategies. They first reviewed the literature for strategies that had a research base and paid attention to the psychological rationale provided by the authors of the studies. From these rationales, the strategies were categorized according to purpose for teaching the strategy. Figure 2 presents the 13 categories of strategies.

The advantage of this system of categorization is that it separates the cognitive process believed to be requisite for comprehension from the various individual strategies. Some strategies fulfill more than one psychological function; hence, it makes sense to recognize the multiple psychological possibilities of particular strategies.

Facing the Questions

This background helps to contextualize and provide insights for addressing the questions posed for this article. Now, let us turn to those questions, and based on the literature discussed thus far, see how we might answer them.

First, what can be expected from your students with regard to reading comprehension? To answer this question, a number of things need to be considered. We can be fairly confident that reading comprehension is not a matter of acquiring a set of strategies and becoming a competent reader; rather, it seems that expectations need to be based on a child's language, social, and psychological development. A student's performance is also mediated by interest and prior knowledge. Despite these mediating considerations, however, we can be fairly confident that students *can* learn comprehension strategies, and given a supportive context, *will* comprehend.

What do we know about the development of reading comprehension across the grade levels? We seem to know quite a bit and are on the verge of understanding even more. First, comprehension happens. It is not predictable, however. Consider the following:

- Comprehension—remembering what is read, responding to what is read, using information from what is read— varies according to reader, text, and context variables. A teacher or a researcher cannot describe or predict the success of a student's reading comprehension without taking those variables into consideration.
- Children, youth, and adults are problem solvers and their sense of agency to participate in the construction of meaning is important. If a reader senses little agency, he or she is likely to be a poor comprehender.
- Reading comprehension occurs when the reader is interested and is a participant in choosing the task, and the task accomplishes a personally meaningful purpose. With little interest, choice, or purpose, the quality of reading comprehension is greatly diminished.
- Nearly 20 years of research suggests that reading comprehension instructional strategies help a novice or inexperienced learner become more effective and efficient. Activity theory suggests that these strategies are tools for mediating the text being read; and, as tools, they are created and shared with learners by others in the culture.
- Teachers need to view reading comprehension as an active social process, and they need to model that activity for their students. Concurrently, they need to provide strategies with which students may experiment for their personal use.

FIGURE 2
Lloyd and Anders's Summary of Reading Comprehension Foci and Strategies

Foci	Comprehension Strategies
1. Lesson frameworks	a. Guided reading procedure (grp) with prereading chapter survey and class discussion b. Directed Reading-Thinking Activity (DRTA) c. Directed Reading Activity (DRA) d. Experience-Text-Relationship (ETR) e. Revised basal lesson: Focus on conceptual vocabulary f. Revised basal lesson: Focus on content knowledge and story structure g. Revised basal lesson: Focus on story theme h. Revised basal lesson: Explicit strategy instruction
2. Background knowledge	a. Providing background knowledge statements b. Teaching/using analogies c. Reading conceptually related text d. Providing advance organizers e. Confronting misconceptions f. Previewing stories g. Reading headings h. Providing concrete advanced organizer i. Predicting story events j. Probing background knowledge
3. Text characteristics	a. Mapping stories b. Mapping expository text structure c. Teaching lexical ties d. Providing pattern guides e. Providing cloze exercises f. Using sentence anagrams g. Developing structured overviews (graphic organizers) h. Teaching expository text structures i. Developing structured overview and providing cloze j. Reordering information k. Identifying and eliminating extraneous information l. Identifying main idea m. Creating concept relationship matrix n. Mapping five types of text-based ideas (links) o. Studying map of expository text p. Completing graphic organizer based on text structure q. Diagramming relationships of ideas (idea mapping) r. Revising inconsiderate text to be considerate

continued

FIGURE 2
Lloyd and Anders's Summary of Reading Comprehension Foci and Strategies *(continued)*

Foci	Comprehension Strategies
4. Vocabulary	a. Drilling synonyms b. Decoding drills c. Asking questions to determine meaning from context d. Using familiar content to teach word meanings e. Developing semantic maps and networks f. Reading text with explicit context cues g. Teaching definitions h. Using concept method i. Teaching the concept of definition j. Implementing rich and varied vocabulary instruction
5. Independent study strategies	a. Teaching Survey, Question, Read, Recite, Review b. Generating summary of each paragraph c. Providing study guides d. Postquestioning
6. Imagery	a. Using visual imagery b. Drawing c. Providing pictures d. Providing mimetic maps
7. Self-monitoring/metacognition	a. Learning strategies (Chicago Mastery Learning) b. Underlining interesting words c. Teaching strategic approach d. Using informed strategies for learning e. Using reciprocal teaching f. Teaching inference awareness
8.Teacher/text questions	a. Teaching Question/Answer Relationships b. Questioning about story characters c. Asking inferential questions d. Asking reflective questions e. Asking interspersed postquestions f. Questioning the Author g. Teaching Text Look-Back Strategy h. Asking WH-Questions
9. Self-generated questions	a. Asking predictive questions b. Listing Knowledge, Want to Know, Learned (K-W-L) c. Identifying important points d. Asking higher order questions e. Asking reciprocal postquestions f. Asking self-questions plus underlining
10. Modality	a. Dramatizing stories b. Reading orally c. Reading silently

continued

FIGURE 2
Lloyd and Anders's Summary of Reading Comprehension Foci and Strategies *(continued)*

Foci	Comprehension Strategies
11. Oral reading accuracy	a. Not correcting during oral reading b. Correcting during oral reading
12. Reading and writing	a. Summarizing b. Combining sentences c. Asking reflective questions d. Writing after listening to stories e. Writing creatively after reading
13. Critical reading	a. Direct instruction in critical reading skills
14. Attention/selection	a. Providing purpose b. Providing behavioral objectives c. Providing advance organizer
15. Memory and retrieval	a. Providing elaboration training

As the director of the literacy laboratory at my university, I work with teachers who appear surprised at the energy I expend when describing the teaching of reading comprehension. It might be that investigations showing an advantage for direct or explicit instruction do so simply because of the energy the teacher and students must bring to the lesson.

- A further dimension of comprehension is the process of planning. How will reading a particular text help to fulfill a plan for learning? Reading educators have talked about setting a purpose for reading for many years—purpose setting and planning need to be given greater priority.
- One successful comprehension experience is likely to contribute to subsequent successful experiences. Students' attention can be drawn to what they did to accomplish one comprehension experience and they can be asked to use that experience again. When new strategies are needed, students can be shown alternatives and then asked to reflect on their successes. This act of reflection is related to metacognitive thinking.

Clearly, reading comprehension develops over time as children engage in the process. At this point, we can be fairly confident that teachers can facilitate this growth in response to children's interests, need to know, social skills, and language development. These are attributes that are normally developed; hence, reading comprehension development is a natural co-developing process, which can be enhanced by appropriate strategy instruction.

The next question posed for this chapter was, How do comprehension expectations change across the grade levels? Expectations for reading comprehension could be described if we were to take seriously the following considerations: Reading comprehension instruction should take place within the context of curriculum (the ideas readers are engaging in with their

peers); students' interests and prior knowledge of readers should be accommodated; active engagement and choice is required; readers' purposes for reading must be considered; and teachers need to understand text characteristics to make appropriate instructional decisions. We cannot develop a scope and sequence of comprehension expectations without taking into account all those considerations. Teachers in a school should map these considerations and agree on comprehension instruction that makes sense across the curriculum.

This seemingly is in sharp contrast to some researchers' suggestions. For example, the NRP report (NICHD, 2000) makes a distinction between reading comprehension instruction and reading comprehension instruction in the content areas. It seems that some reading scholars privilege reading instruction for the sake of skill and strategy acquisition without considering the purposes and curricular context in which that instruction takes place. The processes of reading comprehension are enhanced when they are embedded in curriculum, in the content areas. Purpose and text vary by content area; hence, the content areas provide a perfect milieu for comprehension instruction.

Next, what do we know about the efficacy of these instructional interventions? We know a lot. We know that the interventions work, particularly for white, middle-class kids (Guzzetti, Anders, & Neuman, 1999). More studies are needed about strategy use with students who are not white and middle class. Most researchers also agree that strategy instruction should not be taught in a prescriptive and isolated manner, and that students should have a choice of strategies to use, and that they should be embedded in purposes for reading (Duke & Pearson, 2002). We are less confident about the transferability of strategies. That is, if a particular strategy is taught in social studies, we do not know if students will, of their own volition, use that strategy in science. I can imagine, however, that a group of teachers teaching the same students could help the students make that transfer by helping them to see the relationship between the problem in social studies and the problem in science.

And, finally, how can teachers shape instructional programs in ways that take advantage of our knowledge about the previous questions? The answer to this question lies most fundamentally in teachers overcoming their preconceived beliefs and notions about what reading comprehension is and how to teach it. We have substantial data beginning with Durkin's (1978–1979) and more recently Pressley's (2000) studies that little comprehension instruction is occurring. Instead, teachers' practices are typically geared toward attempts to assess comprehension. Teachers learned to teach that way from a variety of sources including basals, colleagues, and teacher education classes.

Richardson and Anders's (1994) investigation of why teachers allegedly "do not use research-based comprehension practices to teach reading comprehension" (p. 160) provides some insight. Their study reveals that when teachers are provided with theoretically relevant empirical evidence to support or to change their practices, that comprehension strategy instruction increases. Further, the teacher participants in this study needed to see that comprehension instruction was most meaningful when embedded in the curriculum and the culture of the classroom. As teachers participated in this study, they were asked to articulate and reflect on their beliefs and to compare those beliefs with empirical evidence. Doing so helped teachers to transform research-

based strategies to accommodate their students, curriculum, and classroom contexts.

Current societal pressures and perceived constraints did mitigate the teachers' willingness, at least initially, to try the strategies. Namely, those constraints were related to "the culture of testing" (Anders & Richardson, 1992, p. 382), which permeates classrooms today. Teachers were afraid that if they attempted these new strategies, students might do less well on the norm-referenced standardized tests. Hence, any attempt to encourage teachers to take up strategy instruction needs to look at the norms established by the tests that measure teachers and students.

Teachers are likely to design instructional programs that embed comprehension instruction when they are encouraged to talk to one another about their curricular expectations and about the possibilities for incorporating reading comprehension instruction. One tool that might be used is the instructional feature analysis (IFA), a flexible planning tool that works something like this: Through conversation, teachers share their curricular goals, their perceptions of their students, and the needs for reading comprehension instruction across the curriculum. Next, they design a feature chart or grid with processes that are most likely to promote reading comprehension at the top of the grid as column headers (see Figure 3 for an example). Possible strategies are then listed vertically on the grid and teachers, through experimentation and discussion, evaluate those strategies by predicting the relationship between learning processes and particular strategies. This grid is used to help teachers develop a curriculum of reading comprehension strategies that relate to their students' needs and their content-based curriculum and instruction.

An IFA was used recently by a group of teachers developing interdisciplinary units in Anchorage, Alaska, USA. The teachers first agreed on the concepts to be taught in the unit, analyzed the characteristics of text resources that addressed the concepts (see Anders & Guzzetti, 1995), and as a result of their analysis and in consideration of their students' instructional needs, selected reading compre-

FIGURE 3
The Instructional Feature Analysis Chart

Examples of strategies / Features	*Set purposes for reading*	*Activate prior knowledge*	*Make a plan*	*Organize*	*Review*	*Collaborate*
1. Brainstorming						
2. Idea Mapping						
3. Using Analogies						

hension strategies that would best help their students to comprehend the material.

To develop such a unit, norms that are dominant in a school culture must be challenged. Teachers are not accustomed to talking with one another about their curricular goals and their instructional practices. Professional developers and teacher educators who provide space and time for teachers to have these sorts of discussions and to do this type of planning are richly rewarded as teachers move toward incorporating theoretically based practices and curriculum (Richardson & Anders, 1994).

Conclusions and Implications

This chapter has provided definitional possibilities for the terms *reading comprehension*, *development*, and *instruction*. Here are the key ideas I hope to have communicated:

- Educators are not in agreement about definitions of these terms. Through discussion, meetings such as the one on which this chapter is based, and meetings in our schools, we need to become more consistent in our understandings of these terms.
- Comprehension happens. It is a multifaceted process that needs to be honored. The process involves readers' cognitive, social, and linguistic experiences both historically and currently. It occurs most successfully when a reader has a personally meaningful purpose for the reading and when the reader is provided a social context with instructional scaffolding.
- Those who provide comprehension instruction need to acknowledge the problem-solving nature of the process and must provide opportunities for students to actively engage (from planning through reflection).
- Changes and improvements in comprehension instruction will take place through teacher education that involves teachers in the processes and activities that research suggests are important for comprehension to occur.

Implications for Research

I do not mean to tie everything up in a nice little package. There are serious issues that need to be better understood in order to fully provide the reading comprehension instruction students need. For example, we know very little about actually how to help students adopt and adapt strategies across contexts.

Further, although suggestions are made in this chapter, we lack a clear vision of what reading and writing across the curriculum would look like. Apparently, it is radical to suggest that reading educators work with colleagues outside the community of literacy aficionados. Anyone who has a master's degree with a focus on reading or literacy is a member of a club with its own language (albeit one fraught with ambiguity) and ways of thinking about teaching and learning. To develop a curriculum and instruction that is truly integrative takes inter- and intrapersonal skills that are not well understood or developed in teacher education programs.

Moreover, literacy researchers need to think deeply about what it means to provide instruction across the curriculum. Some literacy experts seem to believe that to provide comprehension instruction in the content areas diminishes the quality of the reading instruction. Conversely, content area teachers sometimes report that spending instructional time on literacy instruction takes away from the content they are

trying to teach. Attempts to move from this bipolar stance could possibly garner tremendous benefits for students, teachers, and researchers.

Finally, I have made an inferential leap by linking the planning and problem-solving literature to reading comprehension. I hope that by introducing this literature, others will be spurred to doing the research needed to confirm the concepts presented.

Implications for Teacher Education

The theory of reading comprehension instruction suggested in this chapter requires that teachers be able to reflect on their own behavior and cognition related to reading, that teachers be able to articulate their vision of curriculum and instruction to and with their colleagues, and that teachers be able to find intersections within the curriculum for integration. To do this, recognition of norms in schools that mitigate the possibility of that happening must be faced. Lortie (1975) describes the mitigating norms as being teacher isolation and individualism. He claims that these norms are reified in the name of academic freedom. It is time to face the fact that institutions of teacher education are just as guilty of being constrained by these norms. Professors in teacher education, even in literacy, are likely to be isolated from their peers and to promote their own agendas, and they do so at the risk of sacrificing the coherence and consistency of their programs (Anders, Hoffman, & Duffy, 2000). Teachers learn from their teacher educators, and if curriculum and instruction are to be integrated, mechanisms need to be established in teacher education that show teachers possibilities for that integration.

Second, teacher research (professors researching their instruction and their programs) and teachers researching their practices and curricula is a key notion. This implication is directly related to reading comprehension as a problem-solving activity. Without better understanding the text and context, purposes for reading and for teaching and learning, and the potential outgrowths of what we are trying to accomplish, we are unable to provide coherent instruction. Ignoring these considerations results in nonreflective practice.

Reflective practice is akin to Bruner's (1986) position that knowledge is advanced through community effort. He is speaking generally about knowledge development, but his words apply to those of us in teaching and teacher education, as well:

> I think it follows...that the language of education, if it is to be an invitation to reflection and culture creating cannot be the so-called uncontaminated language of fact and "objectivity." It must express stance and must invite counterstance and in the process leave space for reflection, for metacognition. It is this that permits one to reach higher ground, this process of objectifying in language or image what one has thought and then turning around on it and reconsidering it. (p. 129)

The Literacy Community

Finally, literacy educators need to move forward on clarifying definitions of the key terms in the field and their implications for instruction. We need to expect that these considerations—text, reader, community, and purpose—be considered in any report of reading comprehension research. This would affect the publication of articles and the research, consulting, and teaching we do.

Closing Remarks

I am revising and preparing this chapter for submission as I travel across Alaska. This morning, while having breakfast, I sat next to an obviously middle-class couple and their two young sons—Jack, about 5 years old, and Peter, about 18 months old. I noticed them when they first came into the restaurant because the mother was carrying a travel guide and a children's book of nursery rhymes, the father was carrying the newspaper, and each of the boys had a blank piece of paper and markers. They quickly settled and the boys began marking on their papers, the mom started reading the travel guide aloud, and the dad was checking out the latest baseball scores. Their conversation centered on the texts they were reading and creating. I enjoyed watching this scene and could not help but overhear two conversations that are relevant to this chapter. The first conversation occurred between Jack and his mother:

Jack: Look, I am making a fire. The fireman is all out of water.

Mom: Can't they get water from the waterfall?

Jack: No, they didn't bring enough gas.

Notice the connections Jack made from his immediate past experience and the drawings he was making on the paper. Fires were raging south of Fairbanks, and this family has no doubt seen or smelled them. They have also probably seen waterfalls, and perhaps they have even run out of gas while traveling down the road. Notice also the quality of the mother's commentary. She offered Jack alternative ways of thinking about his story, which was probably based on their immediate experience. Through text and conversation, this mother and child were mediating their experience. This "language event" (Harste, Woodward, & Burke, 1984) and many others that occur in the natural communication between mother (or other significant adult) and child is foundational for reading comprehension development.

The second conversation occurred between the two brothers and the father:

Jack: Here, Pete, I'll show you how to make a 5. [Jack gets off his chair and moves closer to Peter and attempts to take his hand to help him form the number five.]

Peter: No-o-o-o! [Pete yanks his paper away from Jack's reach.]

Dad: Jack, sit down! Leave Peter alone.

I wish Dad had not done it that way (although, from a parent's point of view, I understand why he did). I wish Dad had thanked Jack for wanting to help Peter and, after asking him to sit back in his own chair, would have suggested that Jack try to help Peter at another time. Doing so would have let Jack know that as a big brother, his attempts to teach Peter were appreciated.

These language events demonstrate the beginnings of reading comprehension for two little boys. I hope teachers who understand the multifaceted nature of reading comprehension development will teach them, and they will continue their journey toward a rich and rewarding career as readers and learners. Through instruction and inquiry, each of us is responsible for doing our best to make sure that happens.

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CHAPTER 8

Text Comprehension: The Role of Activity Theory in Navigating Students' Prior Knowledge in Content Teaching

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THIS CHAPTER complements chapter 7 (Anders) because it looks at reading and reading instruction from a less linear and more contextualized perspective. The chapter presents a framework for thinking about inquiry-based lessons—Activity, Response, Context, and Concepts (ARCC)—that is based on activity theory and assists teachers in reflective examination of lessons. Bean provides a review of research literature related to the role of prior knowledge in text comprehension and then examines extensions of that work through activity theory. The chapter includes an example of the use of the ARCC framework for a unit on sleep deprivation.

One of the salient issues in this chapter is motivation, which presages a similar focus in the final chapter of this volume and reiterates one of the quandaries raised in the Introduction. However, note that this activity-theory framework resonates through many of the chapters in this volume. For example, the activity frame for chapter 1 (Bauer) is story reading, and chapter 2 (Yaden and Brassell) is based on a set of interventions built on particular reading activities. However, those two chapters focus on early literacy, and by the time we reach the adolescent period of development, the concerns of motivation are primary.

Most current views of text comprehension portray the construction of meaning as an interactive, transactional process that involves a reader's prior knowledge and its relationship to information in the text. For example, Harris and Hodges (1995) noted that comprehension involves a problem-solving disposition in which prior knowledge comes into play to help a reader construct meaning from a text (see also chapter 7, this volume, for more on defining reading comprehension). Thus, navigating students' prior knowledge becomes important in developing lessons that are likely to maximize students' problem-solving strategies in text comprehension.

In this chapter, I briefly review work on prior knowledge and its role in reading comprehension. Then I introduce more recent thinking about comprehension based on work in activity theory (e.g., Engestrom, Miettinen, & Punamaki, 1999; Wertsch, 1998), which forms a foundation for exploring ways to integrate activity theory and text comprehension in the classroom. Examples of lessons from science and health education will be provided to

demonstrate ways in which you might navigate and integrate students' prior knowledge based on recent work in activity theory. In addition, a reflective lens for thinking about inquiry-based lessons called ARCC will be discussed. ARCC is based on activity theory and assists teachers in reflective examination of lesson elements including Activity, Response, Context, and Concepts.

Prior Knowledge and Text Comprehension

By now, at least two features of the role of prior knowledge in text comprehension are widely acknowledged, if not always activated in classroom lessons. First, what a student already knows influences what is to be learned (Readence, Bean, & Baldwin, 2001), and second, students may well have misconceptions that interfere with new learning (Dochy, Segers, & Buehl, 1999). In a comprehensive review of the research on prior knowledge, Dochy and colleagues affirmed that students organize prior knowledge in cognitive structures based on experiences and related concepts. It may be helpful to think of these cognitive structures as analogous to semantic maps frequently used in classrooms to depict the interrelationships of major categories and their supporting features. For example, if I know a lot about horses, my semantic map would include many different breeds (e.g., Quarter Horse, Arabian, Appaloosa, Morgan, Tennessee Walker), as well as subcategories based on color (e.g., chestnut, sorrel, bay).

Having a rich store of prior knowledge on a topic allows for faster access in reading a text passage (van den Broek & Kremer, 2000). In particular, this fast access frees attentional resources for other dimensions of comprehension such as critical evaluation of the ideas expressed in a text. However, because we often think in metaphors (Lakoff & Johnson, 1999), the potential for misconceptions is high. For example, if I ask you to engage in a simulation where you must sail a model windsurfer upwind and out of the path of an oncoming ship, you might apply your knowledge of sailing to move the windsurfer across the wind, angling your way upwind. Unfortunately, this knowledge alone is insufficient for steering a windsurfer because the angle of the sail's degree of tilt to the front or back of the board also matters. Thus, in this case, prior knowledge might actually interfere with successfully maneuvering the board out of harm's way.

Our cognitive structures, rooted as they are in experience, need to be explored through a combination of experiential activities and texts. Dochy et al. (1999) noted that diverse instructional strategies are likely to help students who may have varying levels of prior knowledge. Unfortunately, in an effort to barge through curriculum and cover the content, this critical feature of concept development is often neglected. Any expectation of a change in students' cognitive structures is extremely difficult to attain when it is exclusively text based (Dole & Sinatra, 1998). For example, if students merely read about how to steer a windsurfer, they are unlikely to modify their prior knowledge of sailing that simply moving the sail in and out will change the course of the board. Conceptual change would involve refining this view to include sail tilt using the highly flexible universal joint at the base of the windsurfing sail's mast. Dole and Sinatra argued that the strength and coherence of a students' prior knowledge also influences future learning. If confidence in the richness of these knowledge structures is not too strong, and the knowledge structures are

not fully coherent, a student may be more open to new learning.

Dole and Sinatra suggested that students in inquiry-based classrooms should be asking themselves some key metacognitive questions that might include the following: How do I learn? How do I solve problems? How do I think critically? Am I aware of what I believe and what it would take to convince me otherwise? In addition, an excellent way to determine the richness and strength of students' prior knowledge is to ask them to construct a semantic map. The inclusion of many branches and categories suggests richness and strength (Dole & Sinatra, 1998).

Thus, prior knowledge is a double-edged sword. It can help in the acquisition of new concepts through encounters with experiences and texts, and it can interfere with new learning if misconceptions are strong. In addition to these well-grounded views of prior knowledge, recent thinking about learning based on activity theory offers yet another level of support for combining our text-based strategies with experiential learning.

Activity Theory and Text Comprehension

The now well-known William Carlos Williams poem that follows (Williams, 1968, p. 38) exemplifies his philosophy that there are "no ideas but in things" (Jarrell, 1968, p. x):

XXI
so much depends
upon
a red wheel
barrow
glazed with rain
water
beside the white
chickens

Activity theory takes much the same view, but centers around the artifacts and related activities that may be marshaled to accomplish a goal or solve a problem. Thus, the red wheelbarrow mentioned in Williams's poem, or any wheelbarrow for that matter, is a crucial artifact in farm life. I use a blue wheelbarrow regularly to haul hay, grass clippings, sawdust bundles, and other heavy loads around our barn. The horses and chickens hold the wheelbarrow in high regard as a potential windfall for food when grain or grass is left over in its bed.

Most important, much of our discourse is shaped by the artifacts with which we work in our daily lives (e.g., computers, personal digital assistants). Activity theory sees these tools and artifacts as intimately connected to discourse: "Everything one thinks and writes is shot through and through with dialogic overtones" (Wertsch, 1998, p. vii). Indeed, a crucial sociocultural element of activity theory is the degree to which relations of individuals to every aspect of the world around them is societal (Tolman, 1999). The myth of the rugged individualist is dispelled because within activity theory, individual consciousness and collective activity are intertwined (Tolman, 1999). Tolman writes, "At its heart, human ontogeny is a uniquely human, societal process of appropriating historical experience in the form of actions and meanings" (Tolman, 1999, p. 75).

Activity theory, growing out of Marxist concepts of labor with an emphasis on collective efforts in production (Engestrom, Miettinen, & Punamaki, 1999), has strong sociocultural roots in Vygotsky's (1934/1978) work and more recent conceptions of discourse and power (e.g., Fairclough, 1989). Social structures in classrooms

determine, in large measure, who gets a voice and what may be said (Fairclough, 1989). When the teacher is the sole authority in a classroom, students spend time and energy trying to figure out what the teacher wants and attempting to fit into the teacher's predetermined organizational system for learning (Stevens, 2001). In a worst-case scenario, students tune out and consciously stop doing school. As Lompsher (1999) put it, "In most classrooms students are objects of didactic actions aimed at the transmission of knowledge and skills (and norms and values, as well) from the teacher's head (or from the textbook) to the pupil's heads" (p. 226). Activity theory stands in marked contrast to this teacher-centered model.

Object-oriented practical activity using tools formed the initial elements of activity theory. Discourse surrounding object-oriented activity has become a more recent interest, with particular attention to language stimulated by interaction with mediating artifacts. Mediating artifacts include signs and tools common to a society as well as language (Wartofsky, 1979). A "tool may be any artifact created for the purpose of successful production and reproduction of the means of existence. Therefore, the use of language for communication in this enterprise makes language itself such an artifact" (Wartofsky, 1990, p. 201). Mediating artifacts that are signs and tools common to our society might include television remote control units, computers, and digital alarm clocks typically found in the Western postmodern world. Cole (1999) noted that artifacts are material objects we adopt within cultures along with their symbolic resources. Artifacts can be distinguished by their various levels (Wartofsky, 1990). For example, a primary artifact would be a tool used in production (e.g., hammer, ax). A secondary artifact includes representations of primary artifacts and their use (e.g., a horse and rider engaged in roping competitions). Finally, tertiary artifacts are imaginative worlds that spin off of primary and secondary artifacts. Human intersubjectivity, whereby we assign interpretive meaning to events, takes a primary or secondary artifact to the level of a tertiary artifact. "The distinctive structural change in human thought that arises in connection with tool use is that direct 'natural' processes are complemented by indirect mediated ones" (Cole, 1999, p. 89). Thus, within an activity system, the object of the activity—its mediating artifacts, rules, community, and division of labor—are common elements (Engestrom, Miettinen, & Punamaki, 1999).

In addition, the common symbolic artifacts of communication include signs, symbols, texts, formulae, and graphic-symbolic devices (Kozulin, 1998). These symbolic devices serve as psychological tools that help learners manage perception, memory, and attention. For example, if you use a mnemonic device to recall important information, you are using a psychological tool. Years ago I made up a phrase to recall the strings on my guitar from top to bottom, or sixth string to first string, with the acronym: "Elvis always did go broke eating" or E-A-D-G-B-E. This is standard tuning, and the acronym serves as a valuable psychological tool when I want to go into an alternate tuning such as drop D or open G.

These symbolic psychological tool systems are second nature to many learners, but when school-based learning in reading, writing, and mathematics centers exclusively on content, the long-range value of symbolic, psychological tools is lost (Kozulin, 1998). In essence, students need explicit modeling and mention of the functions of psychological tools such as the mnemonic acronym in the guitar tuning example. This effort to make psychological tools a

part of a learner's repertoire is crucial for extending learning beyond the immediate context. As Kozulin (1998) wrote, "The emphasis on process rather than product leads to the development of metacognitive awareness and control" (p. 89). Graphic organizers and semantic maps are symbolic devices that nicely serve this role. However, activity theorists are quick to point out that the usefulness of these graphic devices and other mnemonic schemes is totally dependent upon their direct link to socioculturally sanctioned ways of learning (Kozulin, 1998).

Kozulin (1998) noted that a change in material tools precipitates a wrenching change in a community lifestyle and a related change in its entire way of thinking and its nature. For example, take away all our computers and cell phones and we revert to a lifestyle that communicates far less and much more slowly than we are used to. Think of visits you might make to a rural family home where only a single phone suffices for a whole household. There are no computers, modems, or Ethernet connections. Life proceeds at a slower pace and high-context, face-to-face communication is the norm. Regardless of the material tools available, from a Vygotskian perspective, concept learning involves groups of students in shared, collaborative, and reciprocal learning situations that are culturally determined (Kozulin, 1998). The teacher in this setting becomes a kind of field guide and colearner rather than an authoritarian figure.

Within this view, the psychological tool of language serves two crucial functions: "(1) to scaffold the performance of action in the world, and (2) to scaffold human affiliation in cultures and social groups" (Gee, 2001, p. 715). Thus, the meaning carried by language is directly tied to situated action in the material and social worlds. Gee argued that reading instruction must be tied to communities of practice in various content fields. Language is not detached or neutral but directly related to the culturally accepted conventions of various content areas. For example, narrative forms of text are common in English classrooms but relatively rare in a science lab setting.

Activity theory is employed in research to study local contexts (e.g., classrooms) with particular attention to objects, mediating artifacts, and social organization. For example, if we look at a middle school science classroom where students are engaged in dissecting squid, we might expect to see each of these elements in operation. Those students least squeamish would handle the task of making key slices in the squid to observe its defense mechanisms, visual system, and anatomy. They would use a tool (namely a scalpel) to accomplish these cuts, and their more squeamish lab teammates would record their collective observations (the object of the activity). If we listened in on their discourse, it might include some comments about the "ickyness" of the lab activity. We might also expect that some students would have more discursive power because they volunteered to do the actual cutting of the squid. In many ways, science labs offer a potential model for developing lessons based on activity theory, but it is important to note that even in this setting, the outcome of students' actions are often prescribed. That is, they are supposed to observe key elements of the squid's anatomy, rendering this lab a canned, somewhat literal task.

In contrast, the intent of contemporary activity theory applied to learning is to confront learners with "phenomena, situations, and tasks going beyond their actual possibilities to such a degree that a problem situation can arise" (Lompsher, 1999, p. 268). Thus, learners in this

situation will not have all the requisite knowledge needed to learn something new. Rather, they will need to examine what they do not know and form some collective learning goals. Ultimately, activity theory-based lessons should lead to independent self-regulated learning.

Thus, lessons based on activity theory have two important elements: (1) students' prior knowledge is incomplete; and (2) within a sociocultural framework, students are collectively and cooperatively engaged in an activity in order to achieve a goal or outcome (Beach, 2000; Engestrom, 1999; Wertsch, 1998). Activity theory portrays human cognition as directly related to collectively organized, artifact-mediated activity systems. Within this system, activities are social practices that are goal oriented. For example, steering a windsurfer out of harm's way represents an activity system that could be examined for elements of prior knowledge, richness of cognitive structure, and potential misconceptions. Within an activity system, mediating artifacts are tools and signs that are both external (e.g., the windsurfer model) and internal (e.g., mental models). Problem solving, then, taps into these mediating artifacts along with students' dialogue and conversation aimed at solving a problem (e.g., how to steer the windsurfer upwind). One of the most important aspects of activity theory is that it requires more of learners than is typical of didactic transmission modes of instruction (Davydov, 1999).

Activity theory offers a strong foundation for many of the recent efforts in science teaching to encourage students' inquiry and problem solving (Vander Veldt, 2001). For example, in a science lesson plan on supporting weight (adapted from Dyasi, 2000), pairs of students use an arm span of masking tape and five blank sheets of paper to create a structure that will support at least a 10-pound weight. They work together on this project, examining their prior knowledge for clues about how to best use these limited materials. Once the structure is designed, they test it using heavy books and write in their journals about changes they would make to their design if they were going to attempt this again. Finally, they revise their initial structures and create new, stronger ones that can support up to 80 pounds. Figure 1 depicts a fairly typical structure students might develop on their initial attempt.

Thus, this lesson taps into students' prior knowledge using the artifacts of paper and tape to move toward the community goal of creating a structure that will support a substantial amount of weight. The dialogue that ensues is rich and centered on students' prior knowledge about cylinders and triangles, the effects of wind and earthquakes, and a host of other issues that accompany acting on artifacts. Lessons teachers create with a knowledge of activity theory tend to help students see not only what they currently know about a topic, but also what they do not know. These gaps in knowledge revealed in their initial structures and writing in their journals about what went wrong forms a basis for future goal orientation that may involve researching weight-supporting designs on the Internet. In addition, students might interview engineers, architects, and others with a knowledge of high-rise building design.

Activity theory has also been applied to the design of history lessons by treating historical knowledge as a tool for understanding past and present societies (Hedegaard, 1999). Fourth and fifth graders used exploratory and investigative tasks in museums and other field sites to construct concepts represented in models, posters, and displays. Explicit connections were developed between tool use and tool production as a bridge between nature and societal

FIGURE 1
Paper Cylinders to Support Weight

living. This mediating link was applied to various historical periods including the Stone Age, Bronze Age, the Iron Age, and the Viking Age (Hedegaard, 1999).

ARCC: Activity, Response, Context, and Concepts

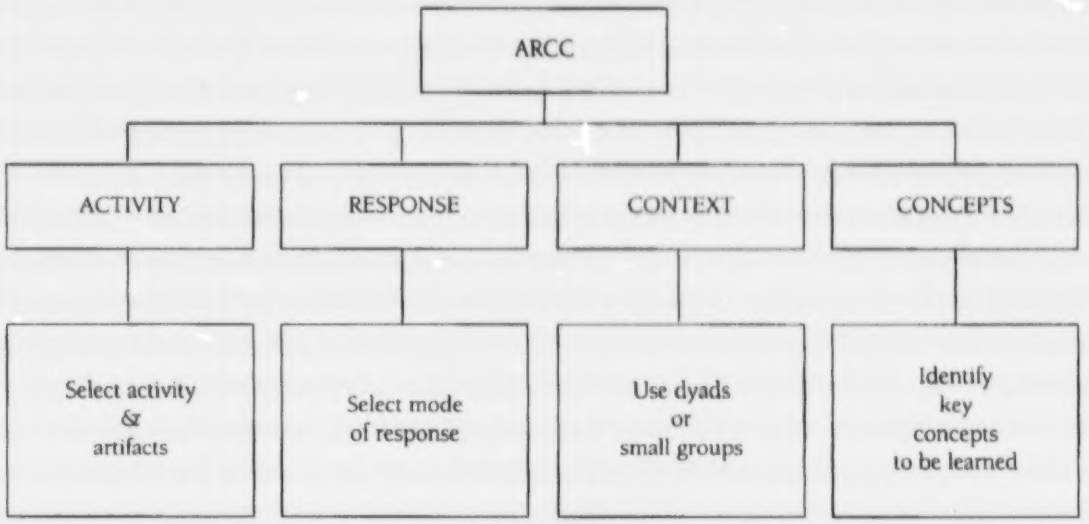
In an effort to formalize the integration of activity theory, prior knowledge navigation, and lesson design, I developed a reflective lesson framework under the acronym ARCC (Bean, 2001). ARCC centers lesson design and reflective critique on the critical elements in an activity theory framework. That is, goal-oriented social practices form the core of the lesson using mediating artifacts as cultural tools (Engestrom, 1999). Figure 2 depicts the key elements of ARCC and its relationship to activity theory.

The four elements of ARCC have very direct links to activity theory, and each element needs to be considered in greater detail. These elements can be carefully considered by the teacher in both the planning and critique phases of a lesson. ARRC will also be helpful in working with preservice teachers in practica settings.

Activity

This first element involves carefully selecting an activity and mediating artifacts that will be part of an inquiry-oriented lesson. In addition, students' prior knowledge is likely to be limited and may include misconceptions about the

FIGURE 2
Key Elements of ARCC



topic. For example, in the lesson that follows, ninth graders in a health class were asked to write down their views of their current sleep patterns. Most felt they were in need of more sleep, but they were unsure of what duration of sleep is best. In this instance, the first activity involves recording and talking about their views of sleep in a journal. The mediating artifact in this instance is the journal.

Response

This next element refers to the mode of response a teacher selects to maximize active engagement with the content of the lesson. For example, journal writing, mapping, video production, drama, song writing, and web page creation are all possible response modes. In the example that follows, ninth graders kept sleep pattern diaries to chart their nightly hours of sleep. This data then became the basis for exploring national sleep research data for students to gauge if they were getting the recommended amount of sleep for good health.

Context

The teacher needs to carefully consider the sociocultural make-up of the classroom and reflect on how small groups are likely to function with particular class members. The teacher needs to decide on the best grouping practices to engage students in active problem solving. The use of dyads or small groups is likely to achieve a collaborative, problem-solving, dialogic setting for learning. For example, in the

sleep patterns assignment, ninth graders met regularly in small groups to chart their nightly sleep and to compare the data they were collecting independently. In addition, they shared Internet resources on teen sleep deprivation.

Concepts

Prior to launching into a lesson, it is important to identify key concepts to be learned and appropriate performance assessments and rubrics that will be used to evaluate students' learning. Thus, in the teen sleep deprivation lesson, students in small groups developed creative presentations that went to the heart of the problems of sleep deprivation (e.g., lowered concentration, driving danger to others, lowered creativity). Their presentations were based on personal experience and research revealing the problems of sleep deprivation.

The ARCC lens with its four elements offers teachers a vehicle for careful reflection about past and future practice.

Teacher Reflection

Current thinking about reflective teaching distinguishes the many forms that reflection can take: retrospective reflection based on past actions, anticipatory reflection devoted to future actions, and contemporaneous reflection in action (van Manen, 1991). However, reviews of research on teacher reflection (e.g., Bean & Stevens, 2000; Risko, Roskos, & Vukelich, 1999) suggest that reflection is unlikely to occur without significant scaffolding. Thus, reflective vehicles like case studies and ARCC offer a means to truly engage teachers in reflective practices.

Based on the ARCC framework, a ninth-grade health science class lesson on "Sleep Deprivation in Teens" illustrates the interplay between the activity, artifacts, students' prior knowledge about sleep needs, and their conversations as the lesson progresses.

Example Lesson on Sleep Deprivation and ARCC

Ms. Romeo, the health teacher at Northside High School, noticed that students in her ninth-grade health classes, in addition to having eating habits that revolved around junk food and sodas, also engaged in sleep habits that were detrimental to their health. She used ARCC to create a unit on teen sleep habits with one of the lessons centering on sleep deprivation. Following ARCC, Ms. Romeo designed lesson elements as an overarching structure within which students could explore the topic more freely. The initial structure is just a departure point with the assumption that it will change as students' learning takes them down unforeseen pathways.

Activity

Ms. Romeo wanted students to start this unit by discussing their views of their sleep patterns first, and mapping these ideas in groups of four. She then planned to direct them to the National Sleep Foundation website, http://www.sleepfoundation.org/howsyoursleep.html, and the Stanford University website of world renowned sleep researcher, Dr. William Dement, http://www.stanford.edu/~dement/adolescent.html. There students could download a sleep questionnaire and a sleep diary to accurately chart their sleep patterns and develop a class database. Thus, the artifacts in this unit included discourse that arose in their initial discussion, sleep questionnaire data, sleep diary data, a

classroom database on this classes' sleep patterns, and a comparison of this data to national profiles listed on the National Sleep Foundation website.

Response

Ms. Romeo wanted her students to produce the key artifacts listed under the activity section with a focus on creating a health fair exhibit devoted to sleep and other health topics. Thus, her ultimate goal was a product that could be shared with a larger audience of teens across the school and community.

Context

Northside High School is a large, urban school in a deteriorating downtown area in a southwestern U.S. city. Ms. Romeo's students were predominantly Hispanic American and African American, with a few Asian American and European American students. To help support their families, many students worked in part-time jobs late into the night. The school received funds for free lunches and a day-care center was available on campus. Ms. Romeo's students, in many cases, spoke English as a second language, and the school was viewed by the district as an at-risk site in terms of students' achievement scores on standardized and district assessments. Nevertheless, Ms. Romeo's health classes were popular with students; she worked hard to engage them in problem-based learning (Oliver, 2001). Her classroom was equipped with multiple computers she acquired through a National Science Foundation grant. Ms. Romeo was the recipient of the district's outstanding teacher award in the past. Her summers were spent in advanced graduate study aimed at improving her success with contemporary students from diverse ethnic, cultural, and linguistic groups.

Concepts

Ms. Romeo wanted her health class to understand the following concepts and others related to teen sleep patterns and sleep deprivation:

- Sleep deprivation in teens is a serious problem.
- It leads to decreases in cognitive functioning.
- It reduces immunity to illness and disease.
- It increases the potential for on-the-job accidents.
- It increases the potential for fatal car accidents caused by falling asleep at the wheel.
- It can result in moodiness and depression, especially in girls.
- Institutional solutions include starting the school day later.
- Individual solutions include altering unhealthful sleep patterns.
- Adolescents need nine hours of sleep each night; adults, eight hours.

In the section that follows, we will go into Ms. Romeo's classroom and get a glimpse into how an ARCC lesson framework based on activity theory unfolds.

The Sleep Deprivation Unit

Ms. Romeo's classroom is located in an older downtown school with adequate space, inviting displays of students' work, posters on health-related issues, and tables and chairs arranged to encourage conversation about health topics. She placed students in groups of four with the charge to think about their present sleep habits and have a group recorder write down the number of hours students think they sleep each

night and why this is the case. Students' self-report data from this initial brainstorming group activity was striking. Students reported a range of two hours some nights due to work or school projects to seven hours other nights. Their class average was six hours.

Nathan: I can't sleep—I work parking cars in a late night restaurant three nights a week, and they pay me good, man. The tips I mean. Each car, at least a dollar. Some nights I make $200 in tips alone, and my family needs the money. I live with my mom, grandparents, and my brother and sister-in-law and their kids. I just drink a lot of coffee and diet [cola] for the caffeine.

Danielle: I go to cheerleading practice and by the time I get home, eat dinner, help clean up, and do homework, it's really late—sometimes midnight—and I get up at 5:00 a.m. So, I usually get five hours of sleep, and I'm always tired. I try to catch up on the weekend, but our apartment is noisy.

Natasha: I love to sleep and I love to sleep in on the weekends. I don't care how much noise my baby brother is making, I sleep right through it. I go to bed early at night and get about eight hours of sleep. When we have school dances, then I stay out late, over at a friend's for a sleepover, and we never go to sleep then, but that's not every week.

Once Ms. Romeo's students charted their sleep patterns with the National Sleep Foundation diary system, they expressed a desire to learn more about how they compared to the national picture for teens. By exploring key websites, they learned that 21% of adolescents go to bed at 10:00 p.m. or later and more than 25% get up at 6:00 a.m. or earlier.

Students learned that a sample of 3,000 Rhode Island, USA, teens found that 87% of students reported that they needed more sleep. In Minneapolis, Minnesota, USA, in an effort to establish later high school bell times in seven high schools, the original starting bell time of 7:15 a.m. was delayed until 8:40 a.m., which resulted in students feeling more alert in the first two periods of the day (Bethesda-Chevy Chase High School, 2001). Ms. Romeo's students also learned that there is physiological support for delayed school starting times. By ages 8 through 12, children's biological circadian rhythms change such that teens feel awake later at night and, as a result, need to gain more sleep in the morning hours than they typically can given early school bell schedules (Dement, 1999). This lack of sleep increases the likelihood of reduced reaction time in driving, impaired judgment, and family conflict.

By consulting well-known sleep deprivation researcher Dr. William Dement's web page at Stanford University, http://www.stanford.edu/~dement/adolescent.html, students were able to identify some specific strategies to overcome sleep deprivation. Sleep experts consider adolescents to be between the ages of 11 and 22. Specific recommendations were as follows:

- Avoid caffeine, nicotine, and alcohol after noon.
- Avoid computer games just before bed.
- Avoid arguments before bed time.
- Avoid trying to sleep with a computer or television on in your room.
- Avoid bright lights in the evening.
- Sleep in on weekends, but not more than two or three hours beyond your usual waking time to avoid disrupting your body clock.

In teams of four, students developed panel displays for a school and district-wide health fair. They used the computers in the classroom to produce attractive PowerPoint charts, graphs, and text for their displays, and one group developed a web page to continue collecting data on sleep patterns from other students so that they could have a longitudinal database. They planned to use this data to convince the school board and administrators to alter the 7:15 a.m. bell time in much the same manner as the Minneapolis High School that experienced success with a later start time.

Thus, the ARCC lesson framework and an emphasis on activity theory transformed what might otherwise have been a didactic, teacher-centered unit on sleep deprivation into one in which students had a significant degree of agency and ownership. Ms. Romeo and her students created a rubric to evaluate their panel displays, and Ms. Romeo was pleased with students' creativity. In addition, they displayed a critical stance toward many of the pharmaceutical products designed to artificially induce sleep.

It may be helpful to think of ARCC as both a lesson and unit framework to guide planning and evaluation. As you move toward increasing students' roles in a unit, use ARCC to evaluate past lessons that might be constructed differently in light of the precepts of activity theory. The key elements of artifacts and mediating discourse surrounding the use of artifacts should be helpful in transforming lessons into more vibrant, student-centered experiences. Indeed, the teacher's role within ARCC is to facilitate students' independent discoveries. By questioning common assumptions about school start times in relation to sleep and work habits, students confront problems that are often overlooked or taken for granted.

The final section of the chapter mentions some implications of activity theory and ARCC for lesson design and comprehension development.

Implications of Activity Theory and Comprehension Development

Activity theory, with its emphasis on the interplay of artifacts, psychological tools, and related discourse offers a powerful vehicle for navigating students' prior knowledge in lesson design. ARCC, based on activity theory, provides a useful framework for teacher reflection at the lesson design and evaluation stages. Inquiry and problem solving are at the forefront of ARCC. Philosophically, working within an inquiry framework requires being comfortable with the view that "learning is perceived as a meaning-making process; the learners and the teacher are recognized as legitimate knowledge-producers, and the learners are authentic collaborators in inquiry" (Peck, 2001, p. 108). In essence, both teachers and students are co-learners. The following reflective questions may be helpful in designing and evaluating units and lessons based on ARCC:

- Will the unit or lesson involve teachers as colearners in inquiry?
- Have artifacts and related activities been selected to maximize collaborative inquiry?
- Has students' prior knowledge been explored and taken into account in designing the unit or lesson?
- Are response modes that maximize students' engagement (e.g., small groups or dyads) an integral part of the unit or lesson?

- Has the sociocultural make-up of the class been considered in unit and lesson design?
- What are the key concepts students need to acquire in the unit or lesson?
- What performance assessments will be appropriate to gauge students' learning?

These reflective questions accompany ARCC as a unit and lesson design framework based on activity theory. Although work in activity theory has its roots in Vygotsky (1934/1978) and others, the more recent work in this area has been the domain of European scholars (e.g., Engestrom, Miettinen, & Punamaki, 1999). If you are new to this work, the brief list of recommended readings in Figure 3 may be a good starting point.

Activity theory will have a positive impact on students' comprehension as we move beyond earlier cognitivist conceptions of reading to encompass important sociocultural dimensions in our teaching. Increasing interest in problem-based learning, inquiry, and authentic assessment should find support in the philosophical and pragmatic elements of activity theory.

In addition, activity theory and critical literacy, with its emphasis on "the texts of everyday life" (Luke, O'Brien, & Comber, 2001, p. 113), encourage students to look behind texts for the hidden agendas that lurk there. For example, within the sleep deprivation unit, students might consider who benefits from the many sleep aids on the market. Whose agenda is served in the ads that support these sleep aids? The artifacts and texts students encounter in and out of school, on the Internet, and in other print forms can be read on multiple levels. At a basic level, comprehending the concepts in these texts is important. However, it is equally important that students develop a stance by which they "research, speculate about, and second-guess the institutional agendas, ideologies, and human agents behind and at work in the text (conditions of production), and to talk about their and other readers' social standpoints, community projects, cultural resources, and positions" (Luke, O'Brien, & Comber, 2001, p. 113). Thus, we may begin to see a movement toward ARCC-style units and lessons that combine elements of the activity theory and critical literacy, both with their genesis in sociocultural views of human learning.

FIGURE 3
Recommended Reading on Activity Theory

Beach, R. (2000). Critical issues: Reading and responding to literature at the level of activity. *Journal of Literacy Research*, 32, 237–251.

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Kozulin, A. (1998). *Psychological tools: A sociocultural approach to education*. Cambridge, MA: Harvard University Press.

In addition, a website devoted to activity theory can be found at http://carbon.cudenver.edu/~mryder/itc_data/activity.html (or use the search keywords "Activity Theory Homepage").

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CHAPTER 9

Adolescent Literacy for All Means Forming Literate Identities

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IN THIS CHAPTER, Moore describes instruction informed by the research and professional literature that centers on literate identity. Literate identity is linked with ideas such as self-concept, self-esteem, persona, role, and subjectivity. Moore says that literate identity should be a prime consideration when designing adolescent literacy programs. He quotes Meek (1983), who wrote that adolescent students who struggle with reading struggle because they are convinced that they cannot be successful in school. Moore asserts that interventions aimed at helping struggling adolescent readers should focus on building students' literate identities through practices that address community and agency. Again in this final chapter, motivation—particularly for struggling adolescent readers—is paramount.

The reading education professional literature reports numerous successes teaching cognitive strategies such as summarizing and questioning (Fielding & Pearson, 1994; Flood & Lapp, 1990; Mastropieri & Scruggs, 1997; Truscott & Watts-Taaffe, 1998), and many of these success stories extend to upper-grade students (Alfassi, 1998; Alvermann & Moore, 1991; Anderson & Roit, 1993; Lebzelter & Nowacek, 1999). However, adolescent literacy programs devoted to strategy instruction are only part of the story. Fuchs, Fuchs, and Kazdan (1999) explicitly acknowledged this situation in their report of a peer-assisted learning strategies program:

> When working with older students whose reading problems have proven intractable over many years, motivation proves to be a key issue. Although PALS (the peer-assisted learning strategies program) was initially novel and enjoyed a brief honeymoon period with these students, peer mediation was not enough to sustain the interest of some students. (p. 316)

In a similar vein, Meek (1983) commented on the metaphysical distress of adolescents who typically struggle as readers in school as follows:

"The real condition of these pupils was not lack of desire to learn, or poor basic skills, but absolute conviction that they could not be successful no matter what they did" (p. 214). Too often adolescents come to see themselves as helpless in school, as passive failures unwilling or unable to take control of their development (Colvin & Schlosser, 1997; Johnston & Winograd, 1985). Many come to resist school reading, adopting strategies that conceal their difficulties (Bintz, 1993; Brozo, 1990).

Adolescent Literacy: A Position Statement (Moore, Bean, Birdyshaw, & Rycik, 1999) takes noncognitive, affective concerns to heart in Principle #6: "Adolescents deserve teachers who understand the complexities of individual adolescent readers, respect their differences, and respond to their characteristics" (p. 8). This principle affirms attention to dimensions of learning that go beyond the cognitive, joining countless other statements over the years.

This chapter describes instruction informed by the research and professional literature that centers on literate identity. Identity refers to the multiple ways individuals view themselves (Davidson, 1996); it is the response to "Who am I?" questions. Although scholars contest the concept of identity (Alvermann, 2001), it generally is linked with ideas such as self-concept, self-esteem, persona, role, and subjectivity. It can be seen as a constellation of opinions and perspectives that individuals hold for themselves depending on their experiences and situations as family members, students, musicians, rebels, and so on.

Literate identity seems to me to be a prime consideration when designing adolescent literacy programs. Literate identity emphasizes much more than cognitive operations, and it goes beyond traditional affective concerns about reading attitude, interest, and motivation. A productive literate identity means that individuals consider themselves insiders amid a fellowship of readers and writers; they think of themselves as members of a literate public. Especially when connected with schooling, a productive literate identity means that individuals are motivated to achieve academically. They have an academic identity, a scholar ethos (Welch & Hodges, 1997). They believe in self-efficacy, thinking that they are responsible for and in control of improving their literacy learning.

Special conditions are needed to shape literate identities among older students who see themselves as outsiders, as academic failures and nonreaders (Gaskins, 1998; Phelan, Yu, & Davidson, 1994; Rose, 1989). Formation of literate identity requires attention if reading and writing are to be extended to all adolescents, especially to those who frequently struggle in school situations. When supporting literate identity formation, two broad, interactive factors deserve consideration: community and agency.

Community

The metaphor of the literacy club (Smith, 1988) aptly highlights the role of community in literate identity formation. Frank Smith's notion of a literacy club represents an affiliation of written language users in which individuals share interests and techniques and identify with role models who exemplify club ideals. Members of such a club, or discourse community (Gee, 1996), tend to adopt particular ways of talking, listening, acting, feeling, responding, and valuing as they read and write. Through acculturation, adolescents take up identities as readers and writers (Moore, 1996).

Teachers actively participate in and affect the nature of classroom communities (Barnes,

Britton, & Rosen, 1971; Dillon, 1989). They influence how individuals identify themselves as students, readers, and writers. To my eyes, the past decade's mainstream research and professional literature has linked at least three aspects of school-based communities with literate identities that educators can influence directly. The aspects, which are enmeshed with one another yet presented separately here for analysis, are social relations, cultural relevance, and partnerships.

Social Relations

Social relations are apparent in the ways people treat one another during face-to-face interactions. Classroom relations circulate among teachers and students, affecting them and being affected by them. Social relations belong to the same family of ideas as climate and milieu; they describe the human contact, the interpersonal context, of classrooms (Freiberg, 1999).

Social relations play out multiple ways in the classroom. Teaching practices such as lecture, discussion, and study guide completion differ from class to class according to the prevalent social relations. A lecture, discussion, or study guide might be dialogic and emancipatory in one class yet monologic and oppressive in another, depending on how individuals treat one another. Social relations are characterized frequently by poles such as democratic/authoritarian, caring/impersonal, and formal/informal, to name a few. I present voice, vision, and labels as three entry points when considering social relations.

Voice. Teachers who promote positive literate identities are explicit about developing social relations that embrace all individuals in daily talk, and that honor students' voices (Langer, 1999; Oldfather & Dahl, 1994). These teachers affirm the values of individuals who express themselves, describing the inherent worth and dignity of individuals as well as the collective attributes of multiple perspectives and relative strengths. They praise and reprimand students equitably, without treating any individual or group preferentially.

Teachers who promote positively students' voices insist upon respect, expecting everyone to act courteously and to honor what others offer. They do not tolerate rudeness or insults. Such classrooms are neither laissez faire with individuals devoted only to what interests them, nor are they overly authoritarian with the teacher always dictating orders. Asserting everyone's right to be heard and to act on their words, these teachers regularly provide students opportunities to express themselves during whole-class, group, paired, and individual situations.

Vision. As with any social enterprise, classrooms with a clear vision, or purpose, enable students to direct their efforts intentionally. Vision guides learners as their efforts consistently move toward something. It fosters a sense of progress. Vision statements can be shared with students—and produced by them—the first few days of school to name and explain a direction. These statements indicate expectations for how students will approach reading and writing and how they will interact with others in the classroom.

Vision statements express where you see yourself and others in the future (Deal & Peterson, 1999). They signal a certain direction rather than provide a blueprint of specifics. They articulate fundamental reasons for developing reading and writing, and answer why literacy is important, with outcomes such as control, insight, opportunities, passport, power, self-sufficiency, and voice.

Clarifying fundamental reasons for reading, a vision, seems to be a common denominator among successful adolescent reading programs. For instance, in the literature, specific programs that center on particular visions yet are aligned with disparate teaching methods range from reading and writing workshops (Allen, 1995), to Reciprocal Teaching (Alfassi, 1998), to technology-based popular culture inquiries (O'Brien, Springs, & Stith, 2001), and to the exploration of classical novels such as *Les Miserables* (Maldonado, 2001).

General support for the value of vision is offered by Reyes, Scribner, and Paredes (1999), who concluded in their examination of three elementary, three middle, and two high schools that, "The first thing learned from our studies was that the reason these schools stayed on a steady course, creating a learning community that produced high-performing Hispanic students, was that they embraced a shared vision of success for all students" (p. 188). Langer's (2000) analysis of 19 schools that beat the odds in teaching students to read and write well echoes this conclusion with the finding that educators nurtured a climate that orchestrated coordinated efforts to improve student achievement. These efforts consistently related to clear, direct visions.

Labels. Labeling students seems to produce subtle effects on social relationships and concomitant identities. Those with difficulty completing school tasks often are labeled disabled or remedial. Such labeling expresses a view of someone as a flawed, broken individual with little control over his or her plight—an identity individuals might assume. With regard to gender, a girl might realize she is not expected to excel with math and science, so she adopts a mediocre approach to and proficiency with math and science. A boy might realize that his peers do not value being a proficient, avid reader, so he disengages from print. Individuals also might be grouped according to family income, ethnicity, home language, immigrant status, test proficiency, and career aspiration.

Social markers are powerful; they position students to think of themselves and act certain ways. Influential teachers, parents, and friends who treat adolescent readers as struggling and slow due to such markers often produce, or at least reinforce, readers who act accordingly (McDermott & Varenne, 1995). Conversely, viewing and acting toward individuals according to what they can become—literate, high-achieving individuals—helps them adopt similar identities.

A productive teaching-learning relationship with adolescents who struggle as readers is to make it known that every reader encounters passages he or she finds difficult (Schoenbach, Greenleaf, Cziko, & Hurwitz, 1999). This approach leads to instructing all students in how to solve reading and writing difficulties according to their level of functioning. Emphasizing the idea that literacy is not something mastered once and for all leads to learners who see themselves as continually developing rather than as deficient or disabled.

Cultural Relevance

Research in culturally relevant pedagogy has called attention to the promise of school programs with rigorous academic focuses as well as emphases on students' knowledge of and pride in their heritages (Brozo, Valerio, & Salazar, 1996; Jimenez & Gamez, 1999; Kelly, 2001). Emphases are being placed on connecting individuals' literate identities with culturally appropriate interpersonal relationships (Jimenez,

2000) and with a critical consciousness of individuals' social and political status (de la Luz Reyes & Halcon, 2001; Ladson-Billings & King, 1990). Educators are responding to youth who want their personal and social concerns taken seriously while aspiring to high academics (Franquiz, 2001).

Advancement Via Individual Determination (AVID; see http://www.avid.org) exemplifies successful programs that address students' literate identities. AVID is a high school untracking program that increased Hispanic and African American students' entry to college without loss of ethnic identity (Mehan, Hubbard, & Villanueva, 1994). Students in this program meet daily in special classes. The goals and resources available in this program emphasize mainstream literacy skills such as notetaking, test-taking strategies, and general study tips. Teachers stress the value and possibility of attending college. To distinguish AVID as a special academically oriented group, program participants mark their classroom with banners and signs, and they wear badges and ribbons. Positive inclusive images adorn the walls. Role models from various sectors of the community regularly speak about their successes, emphasizing their uses of literacy. Students relate experiences connecting their personal and home lives with school and business spheres.

While assuming a literate identity in AVID, students maintained their cultural ones, a practice termed "accommodation without assimilation." Students created dual identities, developing school-sanctioned literate practices while maintaining ties with their community, family, and peers. They worked toward bicultural and biliterate proficiencies. Strategies to manage these dual identities consisted of some students bringing nonacademic friends into academic settings, taking pride in speaking Spanish with friends and family, and planning to attend college in Mexico. Students also developed a consciousness about their educational and occupational futures. They displayed an awareness of their developing abilities to participate in mainstream practices, but they realized they still could expect to encounter discriminatory barriers.

Partnerships

Partnerships involve collaborative effort. Rather than working alone, people join with one another for collective accomplishment; rather than acting as lone wolves, people form alliances. Partnerships establish communal connections and shape literate identities. The professional literature describes numerous types of literacy partnerships.

Inside classrooms. Various teacher-student and student-student partnerships form inside classrooms, and adolescents adeptly interpret what it takes to succeed in these relationships (Alvermann et al., 1996). Teachers address students collectively in small groups and pairs, and one at a time in conferences. Class members collaborate to accomplish projects. For instance, individuals collectively might brainstorm what they know about a topic before reading or writing about it. They might come together in literature discussion circles or book clubs to talk about what they have read. They might perform jointly a skit or Readers Theatre production. Numerous cooperative, communal ways with words are available for individuals to identify with when accessing print.

Inside schools. Inside schools, media specialists and instructional support personnel interact with students' literacy actions. They might

contribute reading materials, provide access to particular ones, and support students' efforts with materials. Technological support in the form of compact discs, videos, and computers offers powerful possibilities (Hasselbring, Goin, Taylor, Bottge, & Daley, 1997). Literacy-across-the-curriculum efforts provide additional opportunities for expanding the community of readers and writers available to adolescents.

Cross-age teams. Older students working with younger ones in tutoring and mentoring projects is a highly touted partnership (Samway, Whang, & Pippitt, 1995). The partners might produce and distribute books, collaborate in a coaching or tutoring relationship, or serve as reading role models (Berger & Shafran, 2000).

Home-school. Family members often join with educators to support adolescents' reading and writing efforts, as well as general school work. School-family-student communication links that inform one another of upcoming and ongoing projects and grade reports are common. Community schools offer opportunities for family members to participate with school functions and facilities. Additionally, father-son, mother-daughter, and combined family member book clubs are promising (Packard, 2001). Programs for adolescents who are parents that focus on how to promote literacy among young children as well as the young parents deserve attention (Johnson, Pflaum, & Poole, 1995/1996).

After-school programs. Many adolescents who struggle as readers face daily exigencies with chemical dependence and staying within the law. Programs offered after school through organizations such as Boys' and Girls' Clubs, the YMCA and YWCA, public libraries, and churches can help prevent such issues while promoting reading (McLaughlin, 2000). In addition to a secure setting and controlled opportunities for social interaction, these programs might provide literacy opportunities such as homework help and free reading materials.

Community-school. Community members who act on their own and as representatives of local businesses, trade groups, service agencies, and governmental offices can promote the value of literacy and assist with reading and writing practices. In particular, community members might volunteer to serve the following roles:

- artist or author in residence
- external audience for exhibitions
- guest book talks or reading role model
- tutor

In addition to community members coming into schools, community members can host adolescents outside of schools. For instance, community groups might help sponsor book give-aways and sharings in child-care centers, hospitals, and senior centers. Literacy events such as book fairs and shopping-mall book celebrations also occur. Students might visit people at work sites to familiarize themselves with out-of-school expectations and norms of behavior. Internships and mentoring arrangements are common.

Postsecondary schools often partner with secondary schools. Community colleges, technical schools, and universities provide assistance with current issues and with orienting adolescents to future possibilities. Staff development often comes indirectly through professional development schools and site-based teacher preparation. Professors in residence, joint committee participation, recertification

credits, and graduate programs connect faculty at secondary and postsecondary institutions.

Finally, professional staff development resources are available through professional associations such as the following:

- Center for Research on Education, Diversity & Excellence (CREDE)—http://www.cal.org/crede/pubs
- Center for Research on the Education of Students Placed At Risk (CRESPAR)—http://www.csos.jhu.edu/crespar/CReSPaR.html
- CReating Independence through Student-owned Strategies (CRISS)—http://www.projectcriss.org
- National Board of Professional Teaching Standards (NBPTS)—http://www.nbpts.org
- The National Research Center on English Learning and Achievement (CELA)—http://cela.albany.edu/
- National Staff Development Council (NSDC)—http://www.nsdc.org
- WestEd Strategic Literacy Initiative—http://www.WestEd.org/stratlit

Agency

As the first section of this chapter suggests, the professional and research literature has emphasized communal influences on adolescents' literate identities. This section shows how it also has emphasized individual influences, highlighting the time-honored notion of agency. Agency is related to ideas such as metacognition, self-regulation, self-efficacy, and reflection (Belfiore & Hornyak, 1998; Moore & Cunningham, 1998). Cementing these ideas is the notion of the student at the core of his or her learning, controlling his or her actions.

Agency involves a person's autonomy, initiative, and self-determination. It recognizes an individual's personal responsibility for his or her actions. Through agency, individuals have a hand in shaping their own identities amid external communal conditions. Individuals are seen as active agents rather than passive receptors in forming personal identities.

The past decade's research and professional literature has linked at least three aspects of agency with literate identities that educators can influence directly. As with the community aspects, three parts of agency are presented separately here for analysis even though they are enmeshed with one another. The aspects are dialogue, school success actions, and structured freedom.

Dialogue

Many programs call attention to learners reflecting on and monitoring their performance, and much has been said about the role of dialogue in promoting these actions. Many people might carry on a dialogue about reading through metacognitive conversations (Schoenbach, Greenleaf, Cziko, & Hurwitz, 1999). In such an external dialogue, teachers and students talk about how they read, why they read, and their responses to what they are reading. These dialogues are meant to make visible and understandable what is invisible and mysterious. They help learners come to grips with their mental activities so they can control them in the future.

Internal dialogue consists of what students say to themselves (Purkey, 2000). Teachers might call attention to how internal dialogue relates with literacy skills by having students brainstorm thoughts they have (or questions they ask themselves) when they do not want to read or write something; these thoughts can be

called "shut-downs" (Ortiz, 1996, p. 495). Students might produce the following questions:

- Why do I have to do this?
- What else could I be doing?
- What will happen if I skip this?

Teachers then might have students brainstorm thoughts they have (or questions they ask themselves) when they look forward to reading or writing something. These thoughts can be called "open-ups" (Ortiz, 1996, p. 495). Students might produce questions such as the following:

- What can I do to stay involved?
- How can I do this right?
- What needs to be done here?

Recording the responses, comparing them, and throughout the year adding to them and reminding students of them is meant to promote literate identities. Students learn how to talk to themselves and shape their actions toward productive reading and writing.

School Success Actions

Academic and literate identities often are characterized by school success actions that are more general than what is involved mainly with reading and writing (Jackson & Davis, 2000; Moore, 1998). Educators often teach actions associated with school success because they embed more specific, technical literacy actions (Krovetz, 1999). The following norms of behavior are candidates for such instruction:

- *Initiates and persists with tasks*—Engages problems actively; does not procrastinate. Manages time productively and responsibly; is punctual. Follows directions.
- *Links ideas*—Defines learning as purposeful acts of integrating personal background with new information and experiences. Actively relates school and personal worlds. Is not satisfied with rote superficial understanding.
- *Pays attention*—Listens attentively when others have the floor. Understands and builds on another's perspective. Treats others courteously and elicits their input.
- *Draws on resources*—Uses multiple strategies and references to solve difficult or ambiguous tasks before asking for help. Takes time to think through a problem. Creates networks among peers, family members, teachers, and others for feedback and support. Is willing to ask for help after initial attempts fail. Interacts with others when group dynamics are especially appropriate for learning.
- *Channels emotions*—Turns missteps, breakdowns, and defeats to advantages; approaches failures as opportunities to learn and for inspiration. Directs frustration and anger productively. Resolves adversity by keeping focused on goals. Redirects anxiety and avoids undue stress. Disagrees without being disagreeable; does not resort to insults, rudeness, put-downs, and profanity when challenged.
- *Demonstrates accurate self-awareness*—Sets and meets appropriate goals. Gives reasons for answers. Addresses limitations productively. Attributes learning to individual effort rather than luck.

Structured Freedom

Providing structured freedom involves students in directing their own learning, thereby promoting individual identities. Structured

freedom refers to limitations on students' choices. It is similar to published recommendations for controlled options (Earle & Morley, 1974) and managed choice (Allington & Johnston, 2001). It designates a balance among teacher and learner direction.

Many authorities recommend some type of structured freedom during units of study (Erickson, 1998; Jorgensen, 1994–1995; Silver, Strong, & Perini, 2000; Tomlinson, 1999; Wiggins & McTighe, 1998; Zmuda & Tomainò, 2001). A common way of doing so is by directing everyone in the class toward a central question, yet accommodating individuals by offering multiple avenues and supports. Figure 1, Possible Grand Canyon Unit Choices, illustrates how a unit on the Grand Canyon might offer structured freedom relative to print materials and forms of expression.

With a unit plan containing structured freedom, teachers typically first establish overall expectations (for example, "At the end of three weeks, answer the question, 'What makes the Grand Canyon grand,' through two forms of expression") as well as possible choices. As Figure 1 shows, students will find multilevel print materials (in this case, books and Internet websites) that are more challenging than others. Along with multilevel reading materials, teachers might contribute audiotaped recordings of passages, opportunities to read passages orally, and multimedia CD-ROMs containing encyclopedias or simulations. Teachers might offer pamphlets, brochures, paper editions of encyclopedias, periodicals, and alternative textbooks. Library books consisting of nonfiction accounts of the Grand Canyon as well as stories set amid the Grand Canyon certainly are

FIGURE 1
Possible Grand Canyon Unit Choices

Print Materials	Forms of Expression
Very accessible • Price, L.G. (1999). *An Introduction to Grand Canyon Geology*. Grand Canyon, AZ: Grand Canyon Association. • http://www.grandcanyon.org	• ads • brochures • commercials • debates • encyclopedia entries • interviews • journals • magazines • myths • newspapers • poems • scripts • skits
Moderately difficult Stegner, P. (1995). *Grand Canyon: The Great Abyss*. New York: Tehabi.	
Difficult Ghiglieri, M.P. (1992). *Canyon*. Tucson, AZ: University of Arizona Press.	
Student choice Individuals select print materials from above or locate their own	Student choice Individuals select forms of expression from above or design their own

appropriate. Culturally relevant materials such as ones presenting Native American, Hispanic, or female experiences with and perceptions of the canyon add to the choices. Students might select the materials they wish to read from those provided, or they might locate their own, typically with teacher input and required approval before use.

Multiple forms of expression also appear. Students select the way (or ways) they will express themselves from the choices provided, or they design their own way (or ways) to express themselves. To be sure, teachers generally limit the possible forms of expression to those students already know or soon will learn; they also determine whether appropriate scoring guides will be available.

Finally, sequence choices (such as students deciding the order in which they will complete tasks) depend on pertinent due dates and what students know how to perform. Individuals follow the sequence presented by the teacher or set their own. Sequence options, like the others, maintain attention to essential unit understandings while contributing to students' decision making and identity formation.

Conclusion

Productively supporting adolescents who struggle as readers in school improvement efforts is complicated (O'Brien, 1998; Rossi & Pace, 1998; Young, Mathews, Klietzman, & Westerfield, 1997). Although some compelling accounts of long-term success are available (see, for example, Davidson & Koppenhaver, 1993; Lee & Neal, 1992/1993; Morris, Ervin, & Conrad, 1996), they represent only the positive tip of the iceberg. The reading education research literature devoted to remediation generally neglects adolescents who struggle as readers in school (Johnston & Allington, 1991; Klenk & Kibby, 2000).

Many reports note that programs for adolescents who struggle as readers should be multidimensional (see, for example, Joyce, Showers, Scanlon, & Schnaubelt, 1998). As this chapter shows, possible dimensions go beyond the literacy ones of word analysis, fluency, comprehension, study skills, and response. My read of the research and professional literature indicates that literate identity is a dimension worth building through community and agency.

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AFTERWORD

Cathy M. Roller

Although the quandaries raised in the introduction have not been solved definitively in the chapters in this volume, the chapters suggest what we do know and propose where we might go for elaboration. What follows are reflections on some of the questions raised in the Introduction, in light of the other chapters in this volume.

What Are the Components of Comprehensive Reading Instruction?

The chapters in this volume—like the many scope and sequence charts of published readers, state and local reading curricula, and state standards—mention many components of comprehensive reading instruction. One of the issues is that lists identify components at varying levels of abstraction so that topics on some lists could be subsumed under topics of other lists, and on some lists, the topics could be augmented with many subtopics. However, two lists of components mentioned in this volume were very similar. Paris (see chapter 4) noted that the New Standards Primary Literacy Committee (1999) identified three essential components of reading for K–3 grades: print-sound code, getting the meaning, and reading habits. Au (see chapter 5) drew on Fitzgerald's (1999) work, also, to nominate three broad categories: local knowledge about reading, global knowledge about reading, and affective knowledge about reading. Local knowledge about reading includes areas such as phonological awareness, sight vocabulary, sound-symbol relationships (phonics), spelling patterns, and word meaning. Global knowledge includes text understanding and response to literature along with strategies that support these broad processes. Affective knowledge of reading, or the love of reading, relates to positive attitudes.

Most of the components of comprehensive reading instruction mentioned or treated in this volume fall into these three broad categories that also correspond to those developed by the New Standards Primary Literacy Committee, which, for convenience, I will label *word-level knowledge*, *comprehension*, and *motivation*.

Furthermore, I believe that these broad categories capture the essence of concerns about comprehensive reading instruction and "balanced" instruction as well. Educators calling for comprehensive instruction, balanced instruction, or both are generally concerned that too much emphasis is placed on one of these components to the detriment of many children's reading development. In the early grades, the concern is generally that there is too much focus on word-level knowledge and too little on comprehension and motivation. At the upper grade levels, the concern is often that motivational factors are ignored and that children who lack word-level knowledge do not have access to appropriate instruction to remedy that lack. Although these categories paint the picture of comprehensive reading instruction with a very broad brush, they do capture the dilemma of middle and secondary

school teachers by asking the question, "What are we going to do about the children above grade 3 who are struggling with reading?" Children at all grade levels have instructional needs in each of three global categories, and schools often fail to address the three categories appropriately with a balanced program that meets the needs of individual children.

How Do the Components Change at Particular Points in the Developmental Trajectory?

Looking across the chapters of this volume, it is clear that some aspect of each of the three broad categories is an issue at each developmental level. Word-level issues are most heavily present at the primary (K–3) level. But it is clear in the chapters on adolescent literacy (see chapters 7, 8, and 9) that conceptual vocabulary is a very important aspect of instruction, and for some students, word-level decoding issues need to be accommodated by providing multileveled texts.

Comprehension issues surfaced early in the volume. In Bauer's chapter (see chapter 1), the young child's code-switching behavior was different in materials that were more closely related to her own experiences, and it was clear that the dialogue surrounding those materials was much more focused on content. Again in the primary grades (K–3), issues of the use of informational text and the comprehension capabilities of primary children were the focus of Duke, Bennett-Armistead, and Roberts's chapter (see chapter 3).

Comprehension clearly dominated the later chapters of the book, with Anders devoting her chapter to theoretical considerations (see chapter 7), and Bean (see chapter 8) and Moore (see chapter 9) demonstrating how comprehension and learning must be the focus for adolescents. Motivation is not a predominant concern for emergent readers; however, by the intermediate and upper grades, it is an important focus. Moore's chapter (see chapter 9) focused on how important it is to establish a literate identity that supports reading so that adolescents both believe they can read and that they want to read to accomplish important academic goals. In a very general way, we have a description of development that shows initially high levels of word-level focus that become relatively less important across the developmental span, we have initially lower levels of focus on comprehension that increase, and we have an increasing focus on motivation across the developmental span. However, at each level some aspect of all three global categories is present and must receive serious attention in appropriate proportions, which change in predictable ways as children grow.

What Instructional Practices Can Foster the Necessary Motivation to Undergird Comprehensive Reading Instruction Across the Grade Levels?

Although motivation is clearly a part of comprehensive reading instruction and instructional emphases related to motivation change across the grade levels, I chose to treat motivation separately because it is such a dominant emphasis in the middle and upper grades. Both Guthrie and Alvermann emphasized the importance of motivation in their opening comments. Guthrie listed motivation support as one of his six components for comprehensive reading instruction; Alvermann focused on the importance of

observing adolescents' out-of-school literacy behavior in order to understand how to create conditions that motivate reading.

In reading across the chapters, I was struck by the number of times "structured freedom" (see Moore, chapter 9 this volume, p. 155) was presented in terms of successful reading experiences. Structured freedom was present in early literacy environments, and it is important for intermediate grade and adolescent readers, as well. In Bauer's chapter, Elena most frequently chose the books she read or that were read to her, and many of her recorded readings were spontaneous events she initiated after the family story reading event closed (see chapter 1). In Yaden and Brassell's chapter, one of the major interventions was to place literacy-related materials (such as pens, pencils, various types of paper) in play centers to be used by children in their play activities (see chapter 2). Au (see chapter 5) wrote about ownership, noting that students who take ownership of reading—a form of affective knowledge—"use literacy for purposes they set for themselves, both in and out of school. In other words, they value literacy and make it part of their everyday lives" (p. 72). Similarly, Moore's chapter, which focuses on fostering a literate identity, presents specific strategies for creating that identity by fostering literate communities and creating a sense of agency in adolescents. Many of the characteristics that structured Elena's reading experience in chapter 1 are characteristics that Moore highlights in chapter 9 as he helps us understand how to provide adolescents with learning experiences that foster their literate identities. Bean's explication of activity theory and of ARCC also explain the notion of structured freedom (see chapter 8). The chapters of this volume strongly emphasize the importance of structured freedom in fostering the motivation to read.

How Can Reading Instruction Be Both Comprehensive and Adapted to the Wide Range of Differences Present in Today's Classrooms?

Already the demands we are making of reading instruction are extensive. First, the instruction at all grade levels must address the three global categories of word-level knowledge, comprehension, and motivation. Second, the instruction must shift relative emphases in these categories as children develop. And third, instruction must really focus on providing conditions that foster motivation. However, the fourth demand is perhaps even more challenging: How can instruction provide for all the kinds of difference that Strickland mentioned in her opening comments—ability, personal experiences, prior experiences with literacy, linguistic, and cultural? And as Strickland asked, "How do we help teachers to deal with all the variability in their classrooms?"

We cannot be of use to teachers if we do not attend to the challenge that the diversity of today's classrooms poses for comprehensive reading instruction. Several chapters of this volume note that diversity. For example, Duke and her colleagues, in debunking myths about young children's ability and desire to handle informational text, reviewed research that indicates a great deal of variation in that ability and desire (see chapter 3). Learner differences initially was one of the major dimensions that the RAND Reading Study Group used to structure its thinking about reading comprehension. In the final report, variability related to texts, tasks, and contexts was considered (see chapter 6). Anders treats difference as the essence of

comprehension, which she views as a constructive process that occurs in social settings (see chapter 7). And, the flexibility of instructional strategies treated in the Bean (chapter 8) and Moore (chapter 9) chapters indicates the importance these scholars place on providing instruction within a common framework, such as ARCC, which allows students to differentiate tasks and to use materials appropriate to their interests and abilities.

As Strickland noted,

> This isn't easy. A lot of variability in the instructional offerings requires a masterful job of organization. The infrastructure in the classroom has to accommodate it. It's not just knowing strategies, and knowing about comprehension, or knowing about decoding. It's how you deliver instruction and deliver it differentially. (this volume, p. x)

In the final section of this afterword, I will draw heavily on Paris's chapter (chapter 4) to talk about how we might integrate assessment and instruction to provide comprehensive reading instruction that is developmentally appropriate and addresses differences—a tall order to be sure!

How Can Teachers Address Time Constraints by Being Selective and Practical While Still Providing Reading Instruction That Is Comprehensive?

In chapter 4, Paris notes that while many are calling for comprehensive, developmentally appropriate, differentiated instruction, teachers are faced with being selective and practical. He asks, "How can we use the unprecedented national resolve and commitment of resources to maximize every child's literacy development?" (p. 55). His focus is on the daily activities of teachers, and his answer to the question is that teachers can "blend their diagnostic assessments of children's skills with the delivery of appropriate instruction" (p. 55–56). Paris begins his explanation by suggesting that assessment should be based on the developmental progress of individual children. He suggests that teachers have a broad conceptual framework to guide their assessment and also suggests that they tailor assessments to purposes, audiences, time, and available resources.

Continuing to use the three global categories as a framework for assessment would mean that we would think about assessment tasks in each of the three areas: word-level knowledge, comprehension, and motivation. Paris writes,

> I do not advocate assessing all children on the same tests just to simplify comparisons among students. Teachers should use their judgments about individual children to select which assessments to give to specific children and when they should be given.

If assessment is used properly, to help teachers be selective and practical in the assessments they give, and hence, in the instruction they offer, then comprehensive instruction that is developmentally appropriate and differentiated is possible.

Because I know my own work in this area best, I will provide an example from *Variability Not Disability: Struggling Readers in a Workshop Classroom* (Roller, 1996). My advice was to select three or four important reading or writing activities and build a predictable schedule around those activities. The activities should involve children actually reading, they should

include an opportunity to share their reading with the classroom community, and they should provide opportunities for direct teaching. The activities I chose were reading aloud to children, independent reading, reading sharing, minilessons, and conferences. Within this structure I could gather information about each child's word-level knowledge, comprehension, and motivation.

I began by directly teaching the children the expected behaviors for each activity. Once they had learned the activities, I learned about the children through careful observation and informal assessment. Based on what I saw them doing, I decided what they needed to learn, whether it was word-level knowledge, comprehension, or motivation, and decided how it would best be learned. I sometimes gave whole-class minilessons, and often taught minilessons in individual conference sessions. Over the time I worked in that setting, I developed a set of general goals to guide my thinking about what children knew and needed to learn: chooses good books, uses good strategies, and makes reading make sense. This set of goals lends itself well to the three broad categories of comprehensive reading. "Chooses good books" focuses on motivational issues; "uses good strategies" deals with word-level strategies for decoding or more global comprehension strategies; "makes reading make sense" clearly focuses on comprehension. This set of goals and activities fits the children I worked with and was flexible enough to allow me to deal with a wide variation in reading abilities while still providing each child with developmentally appropriate comprehensive instruction.

Had I tried to use test data to develop a specific instructional plan for each child, the task would have been overwhelming and probably not very accurate. The point is that all children come to us having mastered something in relation to reading. Observing their behavior and deciding what next step would move them forward simplified a very complex task. Instead of describing the whole realm of possibility, I was able to focus on a smaller but much more critical range of possibilities—the specific areas of word-level knowledge, comprehension, and motivation that were relevant to the particular children in my classroom.

Conclusion

Success with this approach—blending assessment with instruction—requires experienced teachers who know a lot about the range of instructional practices and materials, the "typical" course of development and some likely variations on that course (differences), and how to observe and assess children's performance relative to both. However, we cannot provide comprehensive reading instruction across the grade levels unless we provide teachers with the preparation and professional development they need in order to be selective and practical. Preservice teacher education that provides prospective teachers with only six semester hours of coursework in reading is simply not adequate to provide them with the knowledge and skills they need. Extensive fieldwork in preservice programs and ongoing professional development in reading are essential.

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THE INTERNATIONAL READING ASSOCIATION'S READING RESEARCH 2001 CONFERENCE brought together some of the world's most respected literacy scholars to share their insights on comprehensive reading instruction across the grade levels, a condition that the speakers argued is necessary to produce a fully literate population. A direct result of this conference, *Comprehensive Reading Instruction Across the Grade Levels: A Collection of Papers From the Reading Research 2001 Conference* provides snapshots of comprehensive reading instruction, highlights gaps in the knowledge base, and serves as an impetus to further investigation.

Although comprehensive reading instruction is a complex concept that has proven difficult for researchers, teacher educators, and classroom teachers to define, this collection provides a wide range of perspectives about topics relevant to reading instruction at each stage of a student's development. Topics discussed in this volume include the following:

- Early reading development in young bilingual students
- Enhancing emergent literacy for Spanish-speaking preschoolers in the inner city
- Incorporating informational text in the primary grades
- Linking reading assessment and instruction in the elementary grades
- Balanced instruction and issues of equity
- Forming a research agenda about RAND's *Reading for Understanding* report
- Reading comprehension instruction across the grade levels
- The role of activity theory in navigating adolescent students' prior knowledge
- Adolescent literacy and forming literate identities

With this volume, the contributors hope to extend the reach of the conference to reading educators who may not have had the opportunity to attend. Although a definitive description of comprehensive reading instruction lies beyond the scope of the conference and this volume, this collection provides insights that will inform readers' work.

CATHY M. ROLLER is Director of Research and Policy for the International Reading Association, Newark, Delaware, USA.

ALSO OF INTEREST:

***What Research Has to Say About Reading Instruction*, Third Edition**
Alan E. Farstrup, S. Jay Samuels, Editors
2002

Learning to Teach Reading: Setting the Research Agenda
Cathy M. Roller, Editor
2001

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